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ABSTRACT

Intended for vocational education planners, administrators, or representatives of special population groups, this state-of-the-art report provides a comparative analysis of procedures which typify state-level planning for special needs. The introduction provides a brief account of the historical evolution of the concern for those with special needs and the emergence of planning as an approach to the allocation of resources. The manner of these themes in the present vocational legislation is discussed and a planning model, Management Evaluation Review of Quality (MERQ), is presented as an organizing framework. The methodology used for the identification and review of materials for this report are presented in the next chapter. The five chapters following respectively titled, Policy Development, Needs Assessment, Formulation of Goals and Objectives, Identification of Programs, Services, and Activities, and Resource Allocation, describe the state of the art with respect to planning for special populations. Each chapter is devoted to one of the topical components of the MERQ planning model (with the exception of goal-setting and development of objectives, which are taken together). Provided in each of these five chapters are a brief discussion of the meaning and implication of the particular planning component for special populations, a description of the procedures and practices considered to exemplify the current state of the art for that component, and a conclusion which reviews and discusses the comparative strengths, limitations, and problems encountered in using various generic procedures. The final chapter summarizes and presents conclusions about the problems, factors, and issues which characterize the planning for special populations. (JH)

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Interim Report

Project No. 489AH80021
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STATE PLANNING FOR THE DELIVERY OF VOCATIONAL EDUCATION TO SPECIAL POPULATIONS

A STATE OF THE ART REPORT

Volume I: Planning Procedures

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ABSTRACT

This report is the first product of a research endeavor funded by the U.S. Office of Education to develop and disseminate a planning system to assist States in planning for the delivery of vocational education to special populations. The report assesses the current state of the art in planning for special populations by providing a comparative analysis of procedures which typify State level planning for special needs and a discussion of the implications of current practices.

Information comprising the report was obtained from three basic sources: 1) printed materials whose topical coverage dealt directly with planning for special needs populations, 2) printed materials whose topical coverage was deemed relevant to special populations, and 3) verbal accounts of the planning process and associated problems obtained from presentations at the 1978 American Vocational Association convention and telephone contacts with State agency personnel.

In addition to providing a basis for the development of a planning system, the state-of-the-art report is intended as a resource document for vocational education planners, administrators or representatives of special needs groups. Appended as Volume II of the report is an annotated bibliography of documents related to planning for special populations. The two documents, when used together, provide a systematic assessment of current planning procedures along with a means of accessing related literature and research.

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INTRODUCTION

PLANNING & SPECIAL POPULATIONS - perhaps the two most pervasive influences on contemporary vocational education. Yet despite the saliency of these themes, there is a paucity of readily available literature describing policies, practices and procedures currently being used in planning for special populations. This lack of available information restricts the sharing of useful information, increases the likelihood of unnecessary and costly redundancy, and generally inhibits improvements in the efficiency and effectiveness of the planning efforts.

As a result, it is the purpose of this report to assess the state of the art in planning for special populations. This report is the first product of a research endeavor funded by the U. S. Office of Education to develop and disseminate a planning system to assist States in the planning for vocational education for special populations. Because of the focus of the project, the report concentrates on documenting special needs planning as it occurs at the State level.

In order to provide a context for the consideration of planning for special populations, a brief account is provided of the historical evolution of the concern for those with special needs and the emergence of planning as a rational approach to allocation of resources. The merger of these themes in the present vocational education legislation is discussed and a planning model presented as an organizing framework.

Concern for Special Populations

In the early 1960's there emerged a groundswell of concern that large segments of the society were being systematically denied their rights to

participate in the mainstream benefits of society. This concern culminated in the passage of a host of social legislation for the attainment of social and economic equity. A cornerstone of the legislative architecture for social equality was the Civil Rights Act of 1964 [PL 88-352], of which Title VI prohibited exclusion from Federally funded programs solely on the bases of race, color or national origin.

Vocational education came under the press for social justice with the passage of the Vocational Education Act of 1963. This Act was based on the recommendations of the Panel of Consultants appointed by President John F. Kennedy to review and evaluate vocational education's responsiveness to social needs. During the course of their deliberation, the Panel cited the lack of responsiveness to the various needs of persons with special difficulties as a major failure of vocational education. In reaction to this admonition, Congress made explicit its intent that vocational education provide for persons with "academic, socioeconomic or other handicaps that prevent them from succeeding in regular vocational education programs" [PL 88-210, Sec. 4(c)]. In the preamble to the Act, Congress also declared that vocational education should be realistic in terms of employment opportunities and suited to the needs, interests and abilities of those with education handicaps. A ten percent set-aside was authorized to assist those individuals through experimental, developmental or pilot programs.

The Vocational Education Act of 1963 established a National Advisory Council on Vocational Education and charged it with the responsibility of assessing the changes that occurred as a result of the Act. With regard to providing suitable training to students with special needs, the Council concluded that there was " . . . little evidence that . . . (this) major purpose has been accomplished so far" (Advisory Council on Vocational Education, 1968).

In fact, their inquiries led them to state that it had " . . . hardly been touched." Their charge was tempered, however, by an acknowledgement that there had been hardly sufficient time to allow for full implementation of the Act.

The Council's report echoed the newly acclaimed ideals of society for equal access to employment and educational opportunities. It argued for the reduction or elimination of barriers caused by ignorance, poverty, disease and discrimination through effective education and occupational training. These same concerns were concurrently voiced by various advocacy groups for the handicapped, racial minorities, women, and the educationally and socioeconomically disadvantaged.

Responding to those appeals, Congress enacted the Vocational Education Amendments of 1968 [PL 90-576]. With regard to special populations, the Amendments provided Federal support on a matching basis with minimum State set-aside requirements of 10 percent of the Part B monies for the handicapped and 15 percent for the academically or socioeconomically disadvantaged. Further incentives of up to 100 percent of costs were provided under a separate categorical authorization for exemplary programs and projects for the disadvantaged. The Amendments were subsequently expanded in 1974, [PL 93-380], to include the provision of bilingual programs for those with limited English-speaking abilities.

In further recognition of the unique needs of the handicapped. Congress passed the Education of the Handicapped Act of 1971 [PL 91-230], the Rehabilitation Act of 1973 [PL 93-112], and the Education of the Handicapped Act as amended in 1975 [PL 94-142]. The Education of the Handicapped Act of 1971 authorized the provision of funds for the construction of facilities and the acquisition of equipment necessary for improved educational services for the

handicapped. States were given support under Part B for the initiation, expansion and improvement of programs for the education of the handicapped. The Rehabilitation Act of 1973 had a more pervasive and global effect with respect to the handicapped. Title V of the Act contained two sections that expanded the basic rights of all handicapped individuals. Section 503 required that businesses with Federal contracts of more than $2,500 must take affirmative action to hire qualified handicapped persons. Executive Order 11246 as amended by 11375 subsequently extended the coverage by requiring that businesses with Federal contracts of more than $50,000 which employed 50 or more persons were required to develop and implement affirmative action plans. Section 504 of the Act prohibited discrimination against handicapped persons in all programs receiving Federal assistance. The Education of the Handicapped Act as amended in 1975 provided that all handicapped children are entitled to a free public education with special services as appropriate to meet their needs.

In the 1970's, society's attention turned to the special needs of women. The impetus of the women's equality movement heightened society's awareness of the existence of long-standing sex discrimination. During the year 1972, two significant pieces of legislation were passed aimed at the eradication of sex bias, sex discrimination and sex stereotyping. Title VII, enacted as an amendment to the Civil Rights Act, prohibited discrimination against employees on the basis of race, color, religion, sex or national origin. Title IX of the Education Amendments of 1972 [PL 92-318] prohibited discrimination against students and employees of education agencies receiving federal funds on the basis of sex, and covered such areas as admission and recruitment, the provision of any benefits or special services, the provision of financial aid, and any conditions of employment.

As indicated by the evolving course of social concern, those segments of society deemed "special" tend to shift over time. Whereas racial discrimination and economic opportunity were the central concerns of the sixties, they have been broadened during the seventies to include sex discrimination and equal access to quality educational opportunities. Historically, the determination of what segments of society were considered as having special needs has been significantly influenced by the presence of advocacy groups representing their interests. It is not unreasonable to assume that as other segments develop advocacy support, social awareness of their causes will increase and they, too, will move into the "special" category.

Therefore, it appears unrealistic to define special populations simply by a listing of those groups that are currently the focus of political and societal attention. If policies and procedures were to be based on a litany of such special needs groups, they would require frequent revision to avoid being outdated. What is required instead is a specification of the necessary and sufficient conditions of "specialness."

These conditions center on the opportunity to succeed. With respect to vocational education, a special needs population is any significant segment of society that has been systematically denied the opportunity to succeed in regular vocational programs. Individuals may be denied opportunity to succeed in a vocational program for a variety of reasons. When a significant number of those being denied share common demographic characteristics, that group of individuals is ascribed the status of a special population and the population comes to be identified by the predominant demographic characteristics held in common. Systematic denial of opportunity to succeed implies that there are certain structural elements of the vocational education system that interact with the demographic characteristics of special

populations to restrict access to and/or reduce chances of successful program completion in comparison with the general population.

Congress proclaimed in the 1968 Amendments and reaffirmed in the 1976 Amendments the egalitarian principle that vocational education is for "all" people. Taken literally, this implies that no person regardless of his or her limitations should be denied access to quality vocational education because of reasons beyond his or her personal control. In recognition of this right of all people to participate in programs suited to their needs and abilities, Congress provided that those persons who can not succeed in regular programs because of social, psychological or physical deprivations must be provided with the special assistance they need to succeed in regular programs or be provided special programs tailored to their unique needs.

Thus, it is incumbent upon vocational education to pursue innovative action to eradicate barriers blocking equal access to educational opportunities and to promote inclusion of those heretofore excluded. Elimination of barriers and the creation of a climate of inclusion will require a concerted effort directed at organizational change. The success of this effort will be critically dependent upon the capability of vocational education to plan for the provision of services to those whose needs make them special.

Planning - The Guiding Force

The roots of planning are deeply embedded in the history of vocational education. The Smith-Hughes Act [PL 64-347] in authorizing Federal support for vocational education, required that States receiving assistance submit an annual plan governing the expenditures of Federal funds. The Vocational Education Act of 1963, by expanding the activities approved for Federal support and the populations to be served, placed increased importance on plan-

ning as a rational means of allocating scarce resources to satisfy the often diverse needs of a growing constituency. The press for greater inclusiveness of those to be served and extended flexibility in the use of Federal funds was even more pronounced in the 1968 Amendments. States receiving Federal support were required to submit a five-year as well as an annual plan. Expectations as to content were made more explicit. In recognition of the added requirements and as an incentive to promote improved planning, States were authorized to use Federal funds to support planning activities.

Congressional reliance on planning reached new heights in the Education Amendments of 1976 [PL 94-482] . The primary purpose of Federal support for vocational education was declared to be

> to assist States in improving planning in the use of all resources available to them for vocational education and manpower training by involving a wide range of agencies and individuals concerned with education and learning within the States in the development of vocational education plans (Sec. 101).

The role of planning shifted from the previous considerations as principally a means of allocating resources to a concern for planning as a participatory process. To promote increased involvement, the planning process was prescribed in terms of the organizations and agencies to be represented and the procedures to be followed in the development of five-year and annual plans. Public participation in the planning process was to be accomplished through membership on State and local advisory councils and by public hearings.

An idealized sequence of planning activities was mandated for the preparation of State plans. The five-year plan is to be based on an assessment of current and projected employment requirements within the State. Goals for meeting the identified current and projected manpower needs are to be ex-

plicitly formulated. Vocational programs and services or other training activities for achieving those goals are to be identified, program enrollment targets established, and responsibilities for program offerings assigned to secondary, post-secondary and adult levels of education among the various educational institutions within the State. Allocation of local, State and Federal funds to programs and training opportunities, education levels and institutions are to be described and reasons provided for the proposed assignment of programs and allocation of financial resources. Annual plans are to be prepared as a means of updating the five-year plan. They are to show the planned programmatic uses of funds for that fiscal year and to provide reasons for any deviation from the uses described in the five-year plan.

Planning for special populations is given explicit attention. States, in the preparation of their five-year plans, are to set forth the explicit uses of Federal funds for meeting the special needs of the handicapped, the disadvantaged, and those with limited English-speaking abilities. Policies and procedures which assure equal access to vocational education for both women and men are to be described and are to include the incentives to be provided to encourage enrollment of the under-represented sex in non-traditional courses. Procedures and programs are to be set-forth for assessing and serving the needs of displaced homemakers, single heads of households, persons working part-time who desire full-time work and those who seek employment in jobs traditionally held by members of the opposite sex.

An Organizing Framework

The sequence of planning activities prescribed in the 1976 Amendments can be construed as a rational model for allocative planning. Goals are to

be formulated based on assessed need for job skills and projected enrollment. Programs, services and activities as means for the achievement of goals are to be identified and responsibilities for their offering assigned to educational levels and institutions. Financial resources necessary to implement these programs, services and activities are to be allocated to educational institutions within the State.

This conceptualization of the planning process has been utilized by the Office of Education in structuring its review of State-level planning as a component of the Management Evaluation Review for Quality (MERQ). The MERQ is an on-going assessment conducted by the Bureau of Occupational and Adult Education to determine State vocational education strengths and weaknesses as required by Sec. 112(a)(2) of the Education Amendments of 1976. The evaluative criteria used in the MERQ assessment of State planning are categorized into six topical areas:

- policy development
- assessment of needs
- goal formulation
- development of objectives
- identification of appropriate programs, services and activities
- allocation of resources

The topical areas of the MERQ assessment constitute a convenient and meaningful model for structuring the state of the art in planning for special needs populations. Classification of existing planning practices and procedures according to constituent components of the planning model facilitates location of specific practices and procedures and permits ready comparison of the variety of approaches currently used at the State level to provide quality vocational education to special populations.

The methodology used for the identification and review of materials is presented in the next chapter. The following five chapters describe the state of the art with respect to planning for special populations. Each chapter is devoted to a separate topical component of the MERQ planning model with the exception of goal-setting and development of objectives, which are combined. Each chapter begins with a brief discussion of the meaning and implication of that planning component for special needs populations. The introduction is followed by a description of the procedures and practices considered to exemplify the current state of the art for that component. Each chapter concludes with a review and discussion of the comparative strengths, limitations and problems encountered in using various generic procedures. Finally, conclusions and an integrative summary are presented in the final chapter.

METHODOLOGY

This chapter describes the procedures used in the identification, review and selection of relevant materials. The first section presents the procedures used to identify documents and other secondary sources. A subsequent section details the scope of materials reviewed, and a final section describes the criteria used to select those materials for inclusion in the state-of-the-art review.

Document Identification

Two basic approaches were used to identify materials for potential inclusion. First, pertinent documents were identified through conventional literature reviews. A comprehensive literature search was conducted of the holdings of North Carolina State University library. This search was augmented by searches of the libraries of the Center for Occupational Education and the National Center for Research in Vocational Education. The American Vocational Association and the National Advisory Council for Vocational Education were contacted to ascertain their relevant holdings. A computer search was conducted to identify those ERIC documents pertaining to State-level planning for the delivery of vocational education to special populations. Existing bibliographies on special populations and on vocational education planning were also reviewed in an effort to conduct a comprehensive search of the field of readily available published literature.

In order to identify the 'fugitive' literature that exists in the field but often is not formally disseminated, States were contacted directly. Telephone contacts were made after the literature searches had been completed so as not to inconvenience the States by requesting materials available from

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other sources. Each State was asked to describe its on-going activities in special needs planning and to send any materials considered to be descriptive of those activities; e.g., reports, guidelines, pamphlets, bulletins, forms, policies and technical memos. Phone contacts were followed up with letters to each State Director of Vocational Education listing materials that had been received and requesting verification as to currency and completeness of coverage. Documents were obtained from 41 States.

Sources of Information

Information was obtained from three basic sources: 1) printed materials whose topical coverage dealt directly with planning for special needs populations, 2) printed materials whose topical coverage included or was otherwise deemed to be relevant to special needs planning, 3) verbal accounts of the planning process and associated problems obtained from presentations at the 1978 American Vocational Association convention and telephone contacts with State agency personnel. Included among materials dealing directly with special needs planning were policy statements, reports of completed studies, abstracts of current projects and requests for proposals. Instrumentation used in planning for special populations was frequently furnished. In some cases, instruments were accompanied by procedures describing their purpose, how they were used, and for whom they were designed. In other cases, this information had to be inferred as only the instruments themselves were sent. State-produced guidelines for local planning for the delivery of vocational education to special populations provided yet another source of information. Bibliographies and literature reviews on planning for special populations were examined to identify references to pertinent documents. Historical overviews and summaries of relevant legislation were reviewed to

identify service delivery problems and to elucidate planning issues pertinent to special needs populations.

Because of their relevancy as sources of information, approximately 30 State Plans for Vocational Education for fiscal years 1978-82 were reviewed. Although State plans are basically the products of the planning process, they do contain descriptions of various components of the planning process. This was especially true for the topical area concerning the allocation of resources. In this case, State plans proved to be the major source of information for that particular component of the planning process in that they provided the only available documentation on funding formulas and constituent criteria.

A final source of information consisted of verbal accounts of the planning process as provided by State agency personnel. In the course of the telephone contacts to obtain documentation, State agency personnel oftentimes described procedures for which there was no formal documentation and recounted problems encountered in planning for special populations.

To maximize the benefits of the literature review, an annotated bibliography was produced as a companion document under separate cover. Included in the bibliography are approximately 200 documents selected from those reviewed because they are considered to be the most relevant and useful in terms of planning for the delivery of quality vocational education services to special populations. The bibliography is divided into seven sections: the first section contains materials pertaining to general planning approaches; the next five sections correspond to the MERQ planning components (goals and objectives were again combined) and contain procedures pertaining to each; the final section includes selected documents containing general background information useful in planning for special populations.

Screening Criteria

Not all materials reviewed were appropriate for the purposes of this report. Therefore, a screening process was used to determine which materials should be included.

Reviewed materials were screened according to the following four criteria:

1) Materials must pertain to at least one of the MERQ planning components;

2) Only planning procedures are to be considered for inclusion;

3) Planning procedures must have application at the State level;

4) Materials must be directly applicable to planning for the delivery of services to one or more special populations.

Each of the criteria has an associated rationale. Materials that cannot be associated with one or more of the MERQ planning components preclude classification according to the logic used in this report and hence cannot be integrated into a comprehensive and systematic description of the state of the art. Inclusion is restricted to planning procedures and not planning products in that procedures are transportable, whereas products are generally descriptive of the results. Procedures must have application at the State level in order to conform to USOE contract requirements. Finally, materials must have applicability to special needs since the central thrust of this review deals with planning for special needs populations.

POLICY DEVELOPMENT

Policy development represents the first step in the planning process as defined by the Management Evaluation Review for Quality (MERQ) in planning. As portrayed by the MERQ, effective policy consists of a number of quality components. Policy should clearly state the philosophy of vocational education on which it is based, define the roles of government and non-government organizations and provide for their involvement in planning, and define the delivery system in terms of roles of various providers. Additionally, policy should be sufficiently definitive to provide a basis for future decision making. Thus, as conceptualized by the MERQ, overall policy includes two types of policy statements, both of which are essential to the implementation of policy. One type of statement is of a philosophical nature, describing basic beliefs or missions and providing direction to the vocational education system. The second type of statement is an operational policy statement which is more prescriptive in nature and represents a basis for operation of the system. Philosophical policy statements are important in that they define a reason for existence and thus inspire commitment to the vocational education system. Operational policies, on the other hand, are necessary for day-to-day decision making and the continued maintenance of the vocational education system.

The necessity for policies of both types which address the vocational education of special populations is particularly acute. With the early origins of vocational education, general philosophies have had a chance to filter down through various levels of the vocational education system. In regard to special needs groups this may not be the case. Serving special populations is a relatively new vocational education emphasis; thus, the

philosophy underlying the emphasis is not always apparent. As a result, policies addressing the needs of special populations are often fragmented and provide little direction for a comprehensive approach to State-level planning for the delivery of vocational education services to these groups. With a broad base of philosophical intent regarding vocational education for special populations, operational policies, rules and regulations have a logical, sound and understandable basis.

Once the philosophical basis is established, it is important that operational policies are developed which target various special populations. Such policies provide additional guidance in terms of decision making and a mechanism whereby the philosophy can be felt at the programmatic level. For example, a broad policy may state that vocational education will be available to all persons within the State. Though the policy clearly indicates the intent of the State to serve all individuals, it does not describe how or for whom this will be accomplished. Thus, without operational policies to implement or further define philosophical intent, segments of the population may be easily overlooked. To be most effective, the policies should include definitions of special populations and means for providing service. Definitions of special populations, though they should not be considered all-inclusive for purposes of future policies, are necessary to provide a means for targeting programs or program elements to those groups. Inclusion of a range of service mechanisms is important in order to provide for coordinated and comprehensive planning, thus enabling States to assume a leadership role in serving special populations.

The importance of effective policy is exemplified in a conclusion put forth by the University of California Division of Vocational Education (1975):

> One of the persistent stumbling blocks in the pathway to quality vocational education programs has been the nature of, or in many instances the lack of, policy for vocational education at the state level . . . Policy at the state level has not been adjusted to meet the new goals set for the vocational education effort by federal legislation, industry, and society.

These statements express the need for both a review of existing policy and the enactment of new policy to better reflect the directions of vocational education. Policies have frequently been characterized as general statements of intent without provision for operation of the vocational education organization (op. cit., 1975). Additionally, many policies are remnants of past organizational emphases and needs rather than bases for new directions or programmatic thrust. Without policies to guide the effective use of funds, Federal allocations, particularly those set aside for serving special populations, are not always used. Conversely, those policies which are strictly limited to Federal requirements do not necessarily meet the educational needs of the state-wide population. Thus, as stated above, policy must reflect the concerns of not only the Federal legislation, but also those of groups within industry and society at large.

In response to recent Federal legislation many States have begun to adopt vocational education policies that are targeted to special populations. Many of the provisions of the Education Amendments of 1976 have been translated into State-level policy statements. Existing policies have been reviewed and revised to assure state-wide compliance with Federal regulations. However, a Federally-issued mandate to serve does not ensure sound policies. The Education Amendments of 1976 do require that the State Advisory Council advise on policy matters and that policies be "reasonably available to the public," but otherwise do not provide for quality in terms of content or means by which they are developed. As a result policies may be numerous,

yet isolated and limited to responses to Federal legislative requirements (N. C. State Advisory Council for Vocational Education, 1976).

The case for policy is not a difficult one to make. As the first component of the planning process, policy represents the foundation on which a plan is based. The quality of a plan and resultant programs therefore is not likely to exceed the quality of the policy. Unfortunately, as earlier attested, many State vocational education policies, including those for special populations, are limited in nature. Procedures which States could use to review and expand their policies are presented in the next section.

Procedures for Policy Development

The actual making of vocational education policy within the States is executed by an officially designated body, usually the State Board of Education or the State Board of Vocational Education. Policy-making, however, should be distinguished from policy development. The former is essentially an approval function where the inputs of staff members and other persons are incorporated into formal policy statements. Policy development or formulation, on the other hand, is the generation of ideas which constitute the basis for formal policies. It is in this latter function that the major differences between States' procedures are evidenced.

The primary distinction between procedures used by States to develop policy is the amount and type of input allowed or encouraged into the formulation process. Two major types of input have been used by States in the development of policies for special populations:

1) Input from individuals ultimately affected by the policies; and

2) Information from guidebooks developed to assist the States in formulating policy.

Procedures used to obtain input from individuals within the State are presented in the next section, followed by a description of policy development handbooks.

Statewide Input

A common source of input to policy development is that of State and local education agency personnel and other concerned groups. In most cases the process by which input contributes to the evolution of policy is so ingrained in the operating procedures of the State agency and the vocational education system that documentation is not considered necessary unless a substantial change in the operating procedures occurs. A notable exception is a publication produced by the California State Department of Education (1978). The document, entitled Vocational Education Operational Policies, was developed as a means for obtaining the input of all levels of vocational education personnel for purposes of formulating policy for secondary vocational education programs. Included within the document were questions, many of which had policy implications, that had been raised in response to the passage of The Education Amendments of 1976 and answers supplied by the Department of Education. Some example questions and answers presented in the document are:

> Q. 26
>
> Is it necessary for an LEA to provide the required national priority program matching funds if it elects to contract with the office of the county superintendent of schools to provide special programs/services for vocational handicapped students?

A.

Yes. The LEA is required to provide at least 50 percent of the required national priority program matching funds for such contracted special programs/services for vocational handicapped students.

Q. 29

May an LEA expend a portion of its Subpart 2 national priority program allocation for handicapped persons to support vocational education activities for handicapped students enrolled in a special education class?

A.

Yes. Funds may be used to pay the costs of vocational education instructional activities identified in the students' vocational education component of their Individualized Education Program (IEP) plans. Such funds may be used only for those vocational education instructional activities that are specifically designed to assist handicapped students to develop the necessary vocational competencies (skills, attitudes, and knowledge) to obtain entry level employment or to enroll in advanced vocational education courses.

Vocational guidance and counseling and exploratory and general work experience education are not eligible for support.

The policy-related questions addressed the five subparts of Title II of the Amendments, thus many were directed to programs and services for special needs populations. In fact, the sub-section on National Priority Programs (set-asides for the handicapped, disadvantaged and limited English-speaking) contained by far the greatest number of questions. Copies of the document were sent to vocational education personnel across the State for their review, comments, questions and suggestions for additional policies. The Vocational Education Unit staff were then to revise the policies as "need and experience" dictated. Though the procedure was limited in that the document includes only operational policies and these deal strictly with Federal and State legislative provisions, it offers an exemplary approach to obtaining input from educators who will be affected by the resultant policies.

Other States utilize varying degrees of non-administrative input in the formulation of policy. In some instances this input may be obtained through formal means. For example, task forces and ad hoc committees composed of school administrators, vocational directors and other school district representatives have been used as contributors to the development of policy. The process could entail cooperation through regularly scheduled meetings with local agencies and/or State vocational rehabilitation and special education agencies. State agency staff, including program area consultants, special needs consultants and sex equity coordinators are also sources of both formal and informal input to policy development.

Policy Development Guidebooks

Another procedure which could be used by States to develop or refine vocational education policy for special populations is to reference guidelines which have been prepared to assist the States in such a function. The University of California Division of Vocational Education (1975), under contract with the USOE Bureau of Occupational and Adult Education (BOAE), developed a guide for vocational education policy-making. The guide offers a number of sample philosophical principles and general policy statements upon which more specific policies, rules and regulations can be based. The statements were generated through a series of conferences involving members of a project advisory committee and vocational education experts from five representative States. Since the policies address the spectrum of vocational education philosophy and policy, provisions are made for special needs populations, though only in the most general of terms. For example, two of the philosophical principles presented in the guide are:

1) Vocational education provides for the unique needs, experiences, and varying abilities of individuals; and

2) Vocational education is appropriate for all individuals without regard to sex, creed, religion, race, geographical location, or physical or mental handicaps.

General policies which are related to the principles include:

1) Vocational education programs shall be designed to serve all individuals of secondary school age or older, including those who have academic, socioeconomic, cultural, physical or other handicaps, and who need or can profit from the instruction;

2) Vocational education programs shall be provided that allow individuals the opportunity to enter, progress, and exit as their specific needs dictate; and

3) Recruitment, selection, employment and advancement of vocational education personnel shall be consistent with current affirmative action policies.

Adopting general philosophical and policy statements such as these provides a foundation on which to base policies to guide the day-to-day operation of vocational education programs for special needs groups.

Direction for the development of operational policies for vocational education of handicapped students is provided in a guide produced by the Bureau of Education for the Handicapped, USOE (Phelps & Halloran, 1976). The guide coordinates the provisions of recent legislation addressing vocational education of the handicapped into a series of questions to be considered by State agency staff in the formulation of policy. The questions are organized within ten functional areas where policies could impact on services to the handicapped:

- General Application Assurances
- State Advisory Panels
- Assessment and Placement of Students
- Least Restrictive Environment
- Personnel Development
- Curriculum Development
- Exemplary and Innovative Programs
- Cooperative Arrangements

- Barrier-Free Design
- Employment of the Handicapped

The questions essentially constitute a self-assessment of State practices concerning the handicapped, which, if inadequate, may require policies to bring them into line with legislative requirements. A review section is provided with each of the ten groups of questions for further elaboration of issues and problems and the identification of steps to resolve them. The ideal use of the guide, as specified by the authors, is in "joint planning and policy development meetings focusing on vocational education for special needs learners."

A second guide for formulating vocational education policies for handicapped students was developed by the Council for Exceptional Children under contract with BOAE (Davis & Ward, 1978). Input for the guide was obtained from State and local education agency personnel, a nine-member advisory committee, BOAE staff and a number of reviewers from across the United States and Canada. The guide contains descriptions of 67 different policy areas which are organized into nine sections:

- Planning and Administration
- Identification of Students
- Vocational Assessment
- Individualized Education Programs
- Program Placement
- Service Delivery
- Facilities and Equipment
- Personnel
- Fiscal Management

Provided with each policy description are issues related to the policy area, guidelines for the implementation of the policy and, when applicable, requirements of relevant legislation. The policies presented, though primarily directed to local education agencies, are also designed to assist State agen-

cies in the preparation of policies. For example, a policy area included in the guide is "Local education agencies should make every effort to ensure that services of the educational agency are coordinated with services of the rehabilitation agency to provide appropriate vocational education for handicapped students." This statement could easily be translated into a State-level policy to assure that coordinated service to handicapped students does occur throughout the State. Thus, the policy statements presented in the guide provide a means whereby the States could assume a leadership position in coordinating the implementation of local programs and services for handicapped students.

Guidance for the development of policies to assure equal access by women to vocational education is provided in two publications prepared by the Education Commission of the States. The first document is a resource handbook on equal rights for women in education, designed for use by policy makers (Alfrey, 1976). The handbook gives an overview of nine selected areas of education, one of which is vocational education. Included in each of the nine sections is a summary statement of the issues, a selected bibliography, an annotated list of individuals and organizations involved in the area, and relevant State policy statements and legislation. The intent of the handbook is to assist policy makers and developers by providing background information on women's rights to education. A second document addresses women in vocational education (Education Commission of the States, 1977). It includes a model policy statement which consists of an historical statement of the problem and philosophy of the elimination of sex bias and sex stereotyping and general policy components which would contribute to nonsexist vocational education programs. The guide also provides suggestions for the implementation of the policy. These suggestions address the func-

tions of State planning, needs assessment, evaluation, the State governing board, advisory councils, local school officials and educators, and the community in promoting equal access to vocational education by both sexes.

Discussion

As is evidenced by the preceding discussion, procedures used by States in developing vocational education policies for special needs populations are limited in number. Generally, few formal mechanisms exist in the States to elicit input from parties other than State agency staff. Exceptions to this are the use of task forces, ad hoc committees, or dissemination procedures to obtain input. As State policy-making bodies and high level administrative staff do not in most cases include representatives of all special population groups, this input is critical for the development and enactment of effective policy.

A procedure such as that employed by the California State Department of Education, which entails a wide dissemination of prospective policies, is capable of eliciting representative input. However, this is an after-the-fact approach to representing special populations in policy development. That is, the primary directions of policy are decided prior to the solicitation of input from special populations. It is also important to involve special group representatives in the earlier stages of policy formulation. This can be accomplished through the use of a task force or ad hoc committee. For example, a task force could tap a number of sources of input across the State, e.g., local educators, special interest groups and other agencies serving special populations. The task force would then be capable of representing the interests of special populations in the policy formulation process. Use of an ad hoc committee would take this participation one step further.

In this case, individuals representing special populations are able to express their own interests in policy development. However, the use of these techniques is also limited in that they are not capable of achieving the amount and variety of input as a wide dissemination. Thus, the use of both procedures would most effectively represent those individuals ultimately affected by policy. This would also provide for input during more than one stage of the formulation process.

An alternative source of input to policy formulation is guidelines produced to assist the States in developing philosophical or operational policies directed to the needs of various special populations. However, these do not stand alone; they must be tailored to the particular needs of a State. Additional information on State legislative provisions would be necessary prior to enactment of any policies formulated from guidelines with a national scope. Also, further input--from State agency staff, local educators, other agencies serving special populations, special interest groups and the community--is necessary to truly reflect the needs of all populations within the State.

The crucial point, according to Wall (1976), is whether policies issued at the administrative level are sufficiently flexible to meet unanticipated needs or goals at local levels. The greater the involvement of concerned individuals, the more responsive will policies be to local needs. A beneficial side-effect of this involvement is the information gained by participants in the policy development process. The process may in actuality be more profitable than the developed policies by serving to educate those involved (Lamar, et al., 1978). Thus, involving individuals representing various groups and levels or personnel in policy formulation has a multi-faceted influence on the impact of resultant programs:

- It provides for a policy whose direction reflects the vocational education needs of all populations;
- It provides a sound basis for other components of the planning process, rather than a foundation composed of isolated, reactive policies;
- It provides for a strong leadership position on the part of the States in coordinating the delivery of vocational education to special populations; and,
- It provides for an increased level of awareness of and sense of commitment to the policy and thus the delivery system.

NEEDS ASSESSMENT

An accurate assessment of needs is a critical component in planning vocational education programs. In very general terms, needs assessment has been defined as the process of determining the discrepancy between "what is" and "what ought to be" (Kaufman, 1972). As conceptualized in the MERQ planning model, vocational education needs assessments should include assessment of both the needs of identified target populations and the employment requirements of the State. Used in this context, special populations needs assessments are defined as those procedures which are designed to assess the employment opportunities available to special populations and the needs of those populations for services capable of being provided by vocational education.

In the vocational education literature, the term "needs assessment" has been applied to a wide variety of procedures which bear little similarity to each other. These range from procedures for identifying the special education needs of individual students (Evans, et. al., 1978) to comparative analyses of programs serving special populations (Contemporary Research Incorporated, 1974). As Porter (1975) noted, "References to the term 'needs assessment' have been in the literature for nearly a decade, but there is presently no universal agreement on the meaning of needs assessment in education." As a result, many of the vocational education "needs assessments" reported in the literature are not "needs assessments" as conceptualized in the MERQ planning model, and for that reason they will not be described in this section.

In assessing the vocational education needs of special populations, most procedures reported in the literature focus on student or population

needs rather than the employment opportunities available to individuals representing such groups. In part this is probably due to the fact that it is much easier to assess the number of handicapped, disadvantaged, or limited English-speaking persons needing vocational education than it is to assess the employment opportunities which are likely to be available to them upon completion of their education. As Whinfield (1975) described it, "one of the most difficult problems is the identification of appropriate jobs and the subsequent placement of (special needs) students on such jobs . . . . Many of these special groups have traditionally been barred from employment because of misconceptions of employers in particular, and society in general, as to their ability."

The distinction between the occupational capabilities of special populations and the occupational opportunities available to special populations is important to consider in light of Whinfield's comments. Occupational capabilities refer to the match between an individual's physical and mental capabilities and the worker duties and activities required by various occupations. An individual's occupational capabilities would represent the broadest range of occupations for which he/she could be qualified to perform. An individual's occupational opportunities are always less then his/her occupational capabilities, since opportunities also depend upon society's or employers' needs for the particular capabilities or skills of the individual. However, the occupational opportunities of special populations are oftentimes further restricted due to biased or discriminatory hiring practices. Such discriminatory hiring practices prevent many individuals from becoming employed in jobs which they are capable of performing, i.e., for which they have the necessary occupational capabilities. However, discriminatory hiring practices should not be considered justifiable grounds for denying spe-

cial populations access to vocational education programs, whether those populations represent the handicapped, limited English-speaking, minorities, the disadvantaged, women or any other group which has been subjected to discrimination in the labor market. To deny them access to programs on the grounds that their employment opportunities are more limited would only serve to extend discrimination from the labor market into the schools.

In assessing the occupational opportunities available to special populations it thus becomes extremely important that planners consider the worker duties and activities required by various occupations and the capabilities of special populations to perform those activities. As with regular vocational education programs, those programs specifically designed for special populations should be consistent with current or anticipated labor market needs. Where information is available which indicates that employment opportunities in particular occupations are more limited for members of special populations due to discriminatory hiring practices, planners can use that information to promote activities which will overcome discriminatory barriers to employment. Such activities might include programs to dispel the stereotypes held by employers and the general public concerning the occupational capabilities of special populations, job placement programs which give priority to placing students representing special populations, job development programs, etc.

Assessing student or population needs represents the other major component of needs assessment, and in planning for special populations there are several factors which serve to further complicate this component of the needs assessment process. The first issue which a State must resolve is that of defining its special populations. The Vocational Education Amendments of 1976 do not provide a comprehensive definition of "special popula-

tions." In various parts of the Amendments and Regulations one can find reference to particular segments of society such as displaced homemakers, members of minority groups, handicapped persons, disadvantaged persons, persons of limited English-speaking ability, single heads of households who lack adequate job skills, males seeking employment in job areas which have not been traditionally considered as job areas for males, youth offenders and adults in correctional institutions, persons in sparsely populated rural areas, individuals migrating from farms to urban areas, the aged, and others. Some of these references to segments of society are self-defining (e.g., women, youth offenders and adults in correctional institutions, individuals migrating from farms to urban areas); others are defined in the Amendments or Regulations (e.g., disadvantaged, handicapped, persons of limited English-speaking ability). However, when one attempts to assess the needs of these special populations, definitional problems become apparent. For example, the Federal definitions provided for persons classified as either handicapped or disadvantaged stipulate that such persons cannot succeed in regular vocational education programs without special assistance, or require modified vocational education programs to succeed. As such, the classification of an individual as a member of either of these special populations does not depend solely upon characteristics of the individual, but rather it depends upon the interaction between the individual and particular vocational education programs. Thus a student with a particular disability would be classified as handicapped if he/she enrolled in a vocational education program where special assistance was needed, but the same student would not be classified as handicapped if he/she enrolled in another program where the student's success did not depend upon the provision of special assistance. This problem becomes particularly acute when trying to

assess the vocational education needs of the population (i.e., students as well as non-students), since in many instances the need for special assistance cannot be determined independently of the characteristics of the curriculum in which the individual later enrolled.

Another problematic area in assessing the vocational education needs of special populations is the general lack of pertinent information available through secondary data sources which can be used to determine the size of these populations. Most States do not have access to data sources which indicate the size of such groups as women who are homemakers and part-time workers who wish to secure a full-time job, displaced homemakers who need new job skills, academically disadvantaged, handicapped individuals who could not succeed in regular vocational education programs, etc. As a result, an accurate assessment of the numbers of such individuals and their special needs usually requires a rather large-scale survey. Such surveys are expensive and time-consuming; this is particularly likely to be the case when trying to assess the needs of those special populations who are not enrolled in school. Because of this, many States have not yet assessed the needs of their special populations.

Needs Assessment Procedures

This section describes a variety of procedures which have been used to assess the occupational opportunities and vocational education needs of special populations. Some of the procedures are currently being used by State vocational education agencies; others were developed and implemented as research projects funded under Part C of the Vocational Education Amendments of 1968. While many of the procedures were developed for application to a particular special population, the generalizability of the approach to other

special populations should be evident.

The procedures described in this section are divided into two categories: 1) those focusing on assessing the vocational education needs of special populations, and 2) those assessing the occupational opportunities available to special populations. Since the purpose of this report is to describe State-level planning for special populations, we will not report on those vocational assessment systems which are designed for individualized vocational evaluation and counseling (e.g., the Singer Graflex System, the TOWER system, the Wide Range Employment Sample Test, etc.).

Assessing the Needs of Special Populations

A number of alternative approaches are currently being used to assess the needs of special populations. For the most part, the existing procedures focus on the needs of those individuals who are presently enrolled in schools, and several approaches focus entirely on students currently enrolled in vocational education programs. However, in a few States assessments have been conducted which identify the needs of special populations not presently enrolled in school. Since those approaches provide the broadest coverage of population needs, we will begin by describing them.

One of the most comprehensive state-wide surveys of population needs was recently conducted by the Minnesota Division of Vocational-Technical Education in cooperation with three other State agencies. Entitled the Minnesota Household Survey, it entailed the collection of interview data from a sample of approximately 3,500 persons over fifteen years of age. Since the survey was supported by several State agencies, respondents were asked questions covering a wide range of topics. Many of the questions were directly related to the vocational education needs and perceptions of the respondents and the

barriers which might be preventing them from pursuing vocational training.

The survey questionnaire provides enough information on the characteristics of each respondent to enable the results to be classified according to representation from various special populations. By cross-classifying responses to a number of items it would be possible to review the needs and perceptions of such groups as single heads of households, women seeking to re-enter the labor force, minorities, homemakers with part-time jobs, unemployed youth, heads of households, individuals with self-perceived handicaps, limited English-speaking persons, and those with limited reading, writing or arithmetic skills. (We must point out that the validity of the results based on such subsamples of the survey could be jeopardized if too few respondents were represented.)

Of the 204 questions contained in the survey instrument, many were directed at the respondents' views and needs concerning vocational education. Some examples of those questions are presented below; response categories have been omitted for the sake of brevity.

- In your case, do any of the following problems affect your holding a job or finding a better one:
  - Family responsibilities or arranging for the health of your children?
  - Problems with your health?
  - Employers think you are too young (too old)?
  - Lack of experience, education or skill?
- (For persons not employed and not looking): Do you want a regular job now, either full or part-time?
- What are the reasons you are not looking for work at this time?
- In the next 12 months, do you want or plan to take job-related training?
- Are any of the following reasons likely to keep you from enrolling in a job-related training program in the next 12 months: (reasons listed)

- If you were to attend a job-related training program, how many days per week could you devote to the program?
- How many hours per day could you devote to the program?
- How far would you be able to travel for a part-time program?
- Would days, nights or weekends be convenient?
- If the job training program of your choice were available, how soon within the next twelve months would you want to enroll?
- Do you have any of the following handicaps which might make you hesitate to attend a job-related training program:
- What type of program are you most interested in taking?
- How do you feel about vocational education? To what extent do you agree or disagree with the following statements about vocational education?

While the above questions represent but a small sample of the items contained in the Minnesota Household Survey, they are indicative of the types of information which planners could use to better meet the vocational education needs of special populations.

The needs of students representing special populations are usually not assessed through the use of questionnaires to be completed by the students; rather, data are collected from school officials. Quite often such assessments focus on one specific special population, e.g., handicapped, disadvantaged, limited English-speaking, etc. One such assessment of student needs was conducted under contract with the Department of Occupational Education and Technology, Texas Education Agency.

The assessment, Vocational Education Programming for Special Education Students in Texas (Fair, 1976), was a state-wide survey of the status of vocational education for handicapped school-age students in Texas. Data were

collected by means of mail-out questionnaires supplemented by site visits to a limited number of school districts. Two mail-out questionnaires were developed, one to be completed by local directors of special education and the other by local directors of vocational programs. Among the types of information that were collected from these two sources were the following:

- Number of special education students currently enrolled in vocational education programs;
- Number of special education students currently enrolled in special vocational education programs;
- Number of special education students eligible for vocational education classes but not referred to vocational admissions committee due to lack of appropriate programs;
- Number of special education students referred to the vocational education admission committee but not recommended for enrollment;
- Number of special education students who completed vocational programs the previous year;
- Number of special education program completers from previous year who obtained employment in their occupational areas.

The mail-out questionnaire also contained items concerning the local directors' perceptions of the factors that have prevented special education students from being enrolled in regular vocational education programs. Finally, each of the local directors was asked to indicate the types of services he/she felt were needed to enable more special education students to enroll in vocational education programs.

A similar data collection technique was utilized in a study supported by the North Carolina State Advisory Council on Vocational Education to assess the program needs of disadvantaged and handicapped students in the State (Rice, 1978). Like the Texas study cited above, the North Carolina assessment did not collect data directly from students. Mail-out question-

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naires were used to collect information from secondary and post-secondary local vocational program planners or directors. On-site visitations were conducted at a small sample of local institutions to augment the information obtained by the survey; during those site visits interviews were conducted with program administrators, counselors and teachers. Data were collected from local education agencies, community colleges and technical institutes.

While the procedures used in the North Carolina assessment were similar to those used in Texas, the North Carolina questionnaire collected more data on perceived needs and barriers and less information on current enrollments of handicapped students. Sixty-five program elements, grouped within seven program components, were reviewed by local directors and force-ranked within components on the basis of prioritized needs. The seven program components were program support services; instructional personnel; instruction materials, supplies and equipment; instruction-related needs; administration and supervision; staff development; and facilities. Needs were ranked separately for serving disadvantaged and handicapped students.

A state-wide assessment of the needs of disadvantaged and handicapped students in Iowa (Greenwood and Morley, 1978) collected data from vocational education instructors to determine the services currently being provided and to identify problems inhibiting the success of special needs students. The mail-out questionnaires asked the instructors to indicate (check) which of 58 problems were preventing special needs students from succeeding in their classes. The questionnaire enabled the teachers to give separate responses for disadvantaged and handicapped students. Instructors were also asked to review and rank in order of importance a variety of potential solutions to the problems they were experiencing in working with special needs students.

An assessment of the vocational education needs of handicapped students in Colorado (Camaren, et. al., 1975) is one of the few needs assessments which collected data from secondary level handicapped students. The questionnaire was administered by school authorities to a small sample of handicapped persons who were recent graduates of vocational programs in public high schools. Topics on the questionnaire focused primarily on the components of the educational program which were most helpful to the students. The components included such things as academic classes, equipment modifications, special transportation, flexible scheduling, on-the-job training, etc. The questionnaire did not collect any information on the career interests of the former students, nor was the sample large enough to classify the data according to the type of handicapping condition. The lack of data on career interests is rather surprising since the authors' rationale for developing the questionnaire was to collect such information: "As virtually no data were available which presented a broad perspective on the career interests and needs of Colorado's handicapped youth, (the contractor) initiated a survey to fulfill this basic information need" (op. cit., 1975).

The needs assessment conducted by Franken and Tindall (1977) included procedures to identify the career interests of handicapped students. Their assessment utilized questionnaires to be completed by secondary-level teachers of handicapped students between 14 and 21 years of age in Wisconsin. Much of the data they collected pertained to demographic, cognitive and affective characteristics of the handicapped students within the State; however, they also obtained information on the students' educational needs and career goals as reported by their teachers.

The teachers completed a separate questionnaire for each of their handicapped students. Among the items they were asked to complete were three

which dealt with the students' career interests:

- Has this student expressed interest in attending an institution that would develop his/her occupational skills after he/she completes the K-12 program?

- Has the student expressed an interest in attending a VTAE [Vocational, Technical and Adult Education] institution in this state after completion of the K-12 program?

- As you perceive your student's future, which one major career category listed below is closest to your student's career goal?

Seventeen response categories were provided for the last item dealing with the student's career goals, of which fifteen represented occupational clusters. The other two categories were "Careers not done for pay" and "None of these." Another item pertaining to these students' needs asked the teachers to estimate how the student could best be served after completion of the K-12 program. Response categories for that item included: regular classes at a VTAE institution, special classes in a VTAE institution, attending a special school, working in a sheltered workshop, and attending a college or university.

In the Heaney (1974) assessment of handicapped youths' needs for vocational education programs, a multifaceted approach was used to collect information on the vocational needs of handicapped persons in Connecticut and the programs which attempt to meet those needs. As the author described it, "The methods utilized included three survey instruments on vocational training needs, four group meetings with schools, businesses and training agencies, one survey instrument to identify existing vocational programs and interviews with twelve special need high school students." A series of group meetings and mail-out surveys were conducted sequentially to enable participants to further define the training needs of the handicapped. Most of

these meetings and surveys involved relatively small numbers of individuals (10-30) representing various perspectives, such as vocational counselors, pupil personnel directors, special education directors, special education teachers, employers, and personnel representing the State Employment Service, Vocational Rehabilitation and rehabilitation centers.

Heaney personally interviewed twelve handicapped youths who were enrolled in a special skill training program in a high school. These students had a variety of handicapping conditions including cerebral palsy, vision disorders, hearing impaired, physically handicapped, emotionally handicapped, mentally retarded, and learning disabled. The author summarized the results of these interviews as follows: "One of the most interesting discoveries was that many of the students wanted either a job at which one member of the family had been employed or a job which the students themselves might have performed in some capacity . . . . When asked what kind of job they wanted, it was often one which there was little possibility of obtaining skill training."

The needs of women re-entering the labor force were assessed in a statewide study in Wisconsin (Nero, 1975). Data were collected from a sample of 152 women over the age of 30 who had enrolled in vocational programs for the purpose of changing their careers from that of housewives/mothers to labor force participants. A mail-out questionnaire served as the primary means of data collection, although 20 women were personally interviewed. The questionnaire contained 40 items and included questions dealing with socioeconomic status, attitudes of friends and family toward the woman re-entering the labor force, reasons for returning to school, problems related to returning to school, and career plans. The following items appear to be particularly relevant to assessing the needs of this special population:

- Up until starting this program, what was the highest level of education you had completed?
- If you have or have had any academic problems, which of the following caused the trouble?
- Which, if any, of the following problems have you experienced which you feel were caused by or greatly aggravated by your return to school?
- Have you had any job or vocational counseling with a VTAE counselor?
- Has your return to school caused you to obtain any household and/or child care help?
- Which traditionally male-oriented training programs would you be interested in pursuing?
- In what ways do you feel that women in your situation could be better prepared and/or counseled as far as returning to school and the labor market?

The need for bilingual vocational education programs was explored in Texas (Salazar, 1976) through a mail-out survey of bilingual program directors, vocational program directors, vocational counselors, secondary school counselors, and industry representatives. An "opinionnaire" containing 66 items was used to collect data from a sample of 981 persons; 586 individuals responded. The opinionnaire contained a mix of dichotomous (yes/no) questions, Likert-type attitudinal questions, a semantic differential scale, and a section on background information on the respondents. Some of the items which focused upon the needs or problems of Spanish-speaking students are as follows:

- Do language difficulties of Spanish-speaking students in your area contribute to their getting low-level jobs? (yes/no)
- Do language difficulties of Spanish-speaking students in your area contribute to many of them attaining a low level of education? (yes/no)
- Do Spanish-speaking students with limited ability in English receive any benefit from traditional school programs? (yes/no)

- The economic conditions of the educationally disadvantaged Spanish-speaking have a direct bearing on the ability of their children to learn English. (Likert Scale)

- The ability to read well is a pre-requisite skill for nearly all jobs. (Likert Scale)

- Existing vocational programs are not designed to train persons with language and cultural differences to be gainfully employed in jobs suited to their needs. (Likert Scale)

In response to the New Jersey Bilingual Education Act (N.J.A.C. 6:31 Bilingual Education) the State conducted an assessment of students between the ages of 5 and 18 to identify those students whose native language was not English (Palsha, 1976). Each school district was to follow a nine-step procedure defined by the State Department of Education: 1) Identification of Target Population; 2) Preliminary Screening; 3) Identification of Standard Level of English Language Proficiency; 4) Selection of Assessment Instrument; 5) Implementation of Assessment Techniques; 6) Identification of Eligible Participants; 7) Determination of Special Needs; 8) Program Development; and 9) Program Approval. While this survey was not designed specifically for vocational education, the results could be used to determine the areas where bilingual vocational education programs are most needed.

Massachusetts State Laws require a census of school-age children including those who are not enrolled in school (Massachusetts Department of Education, 1977). The census covers every public and non-public school in the State, and includes information on students and non-students between the ages of 3 and 21. Several items included in the census are presented below because they are of particular relevance to assessing the needs of special populations:

- Number of residents classified by age (3-21 years);

- Number of residents classified by age who never completed high school (ages 16-21);

- Number of children not in school whose first language is not English (ages 6-15);
- Number of children not in school who cannot do ordinary classwork in English (ages 6-15);
- Enrollments in vocational programs classified by race, sex, limited English-speaking ability and special education students;
- Number of students who cannot perform ordinary classwork in English classified by primary language and age (ages 3-21);
- Number of students from low-income families;
- Number of low-income students enrolled in special education;
- Number of migratory children enrolled in school;
- Number of students classified by age and sex enrolled in modified and separate programs.

In addition to the above information on characteristics of the student population, data were also collected on such topics as guidance and counseling services, health programs and services, and student testing programs.

The vocational education needs of correctional inmates were assessed in a recent North Carolina study (Davison, 1977). This state-wide assessment collected information pertaining to 1) inmates' needs for vocational education, 2) employment opportunities available to parolees and ex-offenders, and 3) vocational education and training resources available to correctional inmates. Data on inmates' needs for vocational education were collected by means of a 25-item questionnaire administered to inmates in a group setting. Questionnaire items were read aloud to each group of inmates in order to enable inmates with limited reading skills to participate in the needs assessment. A sample of the items included in the inmate questionnaire is presented below; response categories have been omitted for the sake of brevity.

- Have you taken any vocational courses at a prison unit?

- If no, why not? [Eight reasons listed]
- Are you interested in taking vocational courses while in prison?
- If you are interested in taking vocational courses, please number your first, second and third choices. [42 curricula listed]
- What general type of work are you interested in doing after release? [15 occupational areas listed]
- Do you have the skills to do the work you are interested in doing after release?

Information on the availability and quality of vocational training opportunities available to inmates was collected through mail-out questionnaires sent to North Carolina community colleges and technical institutes and by means of site visitations and interviews at correctional facilities. The survey of community colleges and technical institutes collected data on the vocational courses being offered at correctional facilities; vocational curricula being offered at the community college/technical institutes; curricula which are usually enrolled to capacity; and entrance requirements (i.e., minimum reading and math grade-level equivalency or aptitude test scores). Another section of the questionnaire completed by community colleges/technical institutes focused on services that could be provided to inmates (e.g., guidance and counseling, job placement), and problems in providing vocational education to inmates. A similar questionnaire was mailed to private technical schools within the State.

Assessing Employment Opportunities Available to Special Populations

The employment opportunities available to special populations will depend upon the skills they possess upon completion of their vocational program, the demand for workers with those skills, and the hiring practices of employers. In some instances--particularly with regard to certain handicap-

ping conditions--the skills which the individual is capable of acquiring are restricted. As a result, those individuals will have fewer vocational programs available to them and consequently a more limited range of employment opportunities. Regardless of what vocational education does, it cannot prepare blind individuals to become air traffic controllers, it cannot provide the mentally retarded with the skills required of a biomedical equipment technician, nor can it prepare individuals with cerebral palsy to serve as police officers. However, vocational education can provide such individuals with the skills necessary to perform a variety of jobs, and thus one component of a thorough needs assessment is to identify the skills necessary to perform various jobs and the extent to which individuals representing special populations are capable of acquiring those skills.

The acquisition of occupational skills will result in employment only if there is a demand for workers with those skills. Thus in planning any vocational program it is important to include an assessment of the current and future needs for workers with the skills to be provided by the vocational program. In many instances individuals representing special populations will be enrolled in regular vocational education programs, so the assessment of employment opportunities should not be limited to those programs designed only for special populations.

Employer hiring practices represent another factor which will determine the employment opportunities available to special populations. While information on hiring practices can be valuable in planning programs for special populations, such information can also be misused. Individuals who are capable of acquiring the skills necessary for completion of an existing vocational program cannot be denied access to that program on the grounds that their employment opportunities may be more limited than those of other per-

sons because of their sex, race, national origin, or handicap. To do so would be in violation of existing Federal laws and the recently proposed guidelines issued by the Office of Civil Rights, and might also serve to perpetuate discriminatory hiring practices. On the other hand, in planning any vocational education program, including separate programs for special populations, it is important to know whether employers are seeking new or experienced workers, whether they generally fill their skilled occupational needs from within their internal labor forces or recruit from the general labor force, and whether or not they are actively recruiting special populations because of affirmative action requirements.

With regard to assessing the employment opportunities available to special populations, we were unable to locate any needs assessments which included information on each of the above factors. For that matter, very few studies were identifiable which assessed more than one aspect of the employment opportunities available to special populations.

In the area of assessing the occupational capabilities of special populations, two studies were identified which assessed the occupational skill requirements of various jobs relative to certain handicapping conditions. Project CAREER (Lamo, 1974) analyzed 122 sub-baccalaureate occupations in terms of the precise skills necessary for their successful performance. Those skills were then converted into performance objectives, which were defined as "a statement of a skill, including under what conditions and how well the skill must be performed" (Lamo, 1973). Performance objectives were validated by persons presently employed in the occupation being analyzed. Each performance objective was then coded for its relative attainability by students with specific disabilities. These judgements of the relative attainability of performance objectives were made by consultants who had a min-

imum of three years of experience in working with special needs students. Judgements of the relative attainability of performance objectives were provided for each of the following fourteen special needs categories: hard of hearing; deaf; partially sighted; blind; speech impaired; one-leg amputee; one-arm amputee; hemiplegic; paraplegic; quadriplegic; moderately emotionally disturbed; severely emotionally disturbed; educable mentally retarded; trainable mentally retarded.

Codings on the attainability of performance objectives by special needs students were classified into three categories: (1) attainable as stated; (2) attainable with modification(s) in the equipment or work environment; and (3) "the consultant has reserved judgement" at the present time. As described by the author, the coding "indicates to educators the relative attainability of each skill as judged by various experts. This information will be of great significance to school systems integrating special needs students into 'regular' classrooms. The real value of the coding is that it is designed to open new career options for the special needs populations" (Lamo, 1973).

The vocational program opportunities available to physically handicapped individuals were assessed by the New York State Department of Education through a project conducted by the State University of New York. The New York assessment utilized a mail-out questionnaire to be completed by all instructors teaching one or more of the mandatory courses required for completion of some fifty post-secondary vocational programs. Each instructor was asked to provide information on course requirements, classroom procedures, classroom setting, the course's work environment, and physical and personality demands. These data were analyzed and presented as separate profiles for each of the fifty programs. Information on physical characteristics of typical jobs related to each program was derived from the Dictionary of Occupational Titles

and was presented in terms of the following job characteristics: physical demand (sedentary work, light work, medium work, heavy work, very heavy work); setting (indoors, outdoors); climb, balance; kneel, stoop; reach, handle, finger, feel; talk, hear; see; eye-hand-foot coordination.

The New York assessment was designed "to provide program guidance and counseling for the physically disabled two-year college applicant." However, it also provides information of use to program planners. The data indicate that instructors within the same program area differ considerably in their perceptions of the physical performance requirements of their courses. In very few instances did all instructors agree that any particular physical capability was required for successful completion of their courses. Thus the ability of a physically disabled individual to successfully complete a program appears to depend more upon the way the instructor teaches the course than it does upon the individual's disability. Furthermore, the physical characteristics of the typical jobs accompanying each vocational program indicate that specific disabilities do not inhibit individuals from entering all occupations related to a vocational program. For example, the following three occupations are given as typical jobs related to programs of Environmental Technology: water and sewer systems foreman, air analyst, and smoke tester. The data indicate that none of the physical disabilities listed (seeing, talking, hearing, etc.) would preclude an individual from entering all three of those jobs.

In both of the assessments cited above distinctions were made between various disabilities; however, in some other assessments "handicapped" individuals have been treated as a rather homogenous group with similar occupational capabilities. One such assessment produced a listing of 16 occupations or occupational areas for which "the handicapped had a need for train-

ing." The occupational areas listed included machine operation, mail clerk, stenography, building maintenance, domestic worker, automotive mechanic, etc. Since that study did not consider the differences between such groups as the blind, paraplegics, the mentally retarded, etc., it is questionable how one can generalize about their occupational capabilities or needs for training.

The employment opportunities available to handicapped individuals in Connecticut were assessed by Heaney (op. cit., 1974) through an analysis of existing labor market data and a survey of businesses and industries. Two survey questionnaires were utilized to collect data from employers. The first questionnaire asked employers to respond to each of 1,300 job titles in terms of the following:

- If the position exists
- Number of people employed in the position in 1974
- Number of unfilled job openings
- Anticipated employment in 1975-1976
- Increase in 1978-1980
- Available job description
- Number of handicapped employed in the position
- Job training
- Hire with no experience

The comprehensiveness of the first questionnaire was found to be unwieldly by many small companies; as a result, a second survey questionnaire was developed and mailed to small businesses. The second questionnaire did not specify job titles, but instead it asked employers to provide information on their total number of employees, job titles, number of existing positions, unfilled positions, projected increase or decrease in 1975-1976, and hard-to-fill or high turnover jobs. Contacts with employers were also made by telephone, but as the author notes, "many of them (employers) were not total-

ly cooperative due to fear that we were a placement agency for handicapped persons. It is projected by the writer that fear of being pressured to hire the handicapped, the lengthy survey instrument and questions on projected increases (in employment) minimized the results of the survey instrument."

Employment opportunities available to parolees and ex-offenders were included in Davison's assessment of inmates' vocational education needs in North Carolina (op. cit., 1977). In that assessment, projected job openings available to parolees and ex-offenders were obtained by adjusting existing employment projections prepared by the Bureau of Employment Research of the North Carolina Employment Security Commission. Adjustments to the existing projections were made by parole officers assisted by Employment Security labor market analysts. Estimates of the annual number of job openings available to parolees and ex-offenders were prepared for the following occupational categories: industrial; offices; service; education; sales; construction; transportation; scientific and technical; mechanics and repairs; health; social service; art, design and communication; agriculture; professional; other. Separate estimates were obtained for each of the seventeen administrative planning regions and the seven Standard Metropolitan Statistical Areas within the State.

Davison also used another approach in assessing employment opportunities available to ex-offenders and parolees in North Carolina. A telephone survey of employers was conducted to identify employer hiring practices and policies which would reduce the number of job openings available to former correctional inmates. The results of that survey indicated that while most employers would consider hiring an applicant with a criminal record, the specific jobs open to them would depend upon the nature of the crime they committed.

Discussion

The foregoing description of procedures indicates that there is a variety of approaches being used to assess the needs of special populations. While each of the procedures provides information pertaining to the needs of one or more special populations, the types of information they provide and the sources of that information differ considerably.

Surveys of individuals not currently enrolled in school provide the broadest coverage of population needs. Unlike surveys of current or former students, population surveys can provide information on the needs of those segments of special populations which wish to participate in vocational programs but are confronted by circumstances that keep them from attending. Such surveys can be targeted at particular special populations, or they can be more comprehensive in scope but still capable of documenting the specific needs of certain segments of the general population. However, in those cases where the survey collects data from a sample (rather than census) of the population, there is a significant problem of assuring that the sample depicts an accurate representation of the needs of the special population(s). The problems normally associated with sampling are compounded when trying to determine the needs of special populations. Sampling procedures are based on the supposition that the size of the population is known or can be estimated prior to selecting the sample. This might not be the case for special populations, and as a result the sample size may be inadequate for accurately determining the needs of the special population(s) under investigation.

Further complications in surveying the needs of special populations not in school arise from difficulties associated with identifying appropriate individuals to include in the sample. Such surveys collect data from individuals, and the problem is one of determining which individuals should be asked

to provide data. The unique characteristics of special populations make it difficult--if not impossible-- to make an a priori determination of the appropriate people to be surveyed. There are no lists of the names of displaced homemakers in need of vocational education, nor is their likely to be a list of names of "handicapped" individuals who might need vocational training. Thus, how does one sample from an unknown population? This dilemma can be minimized by including a special populations needs assessment as a component of a larger, more comprehensive survey of population needs. Such an approach was utilized in the Minnesota Household Survey, which provided several State agencies with information on the needs and status of the State's population. An interagency effort to survey population needs would also enable the relatively high costs of the survey to be absorbed by several agencies.

Problems associated with identifying members of special populations are less complex when data are collected on the needs of individuals currently enrolled in school. School officials can serve as facilitators in collecting or providing data on the needs of current students. One approach is to have school personnel provide the names and addresses of students who share certain characteristics (e.g., women over the age of 30 who are preparing to re-enter the labor force) and to have mail-out questionnaires sent to those individuals by the State agency. Another approach is to have the State agency provide the schools with the questionnaires and to have local school personnel assume responsibility for collecting the necessary data. In the latter case, the questionnaires might be completed by the student or they might be completed by the students' teachers.

The types of information being sought and characteristics of the special population need to be considered when deciding whether the students or their

teachers should complete the questionnaire. While assessments of the needs of handicapped and disadvantaged students tend to rely on information provided by teachers or other school personnel, one can not expect all teachers to be fully aware of the career interests and unique needs of each of their students. On the other hand, some handicapped and academically disadvantaged students might not be capable of completing a questionnaire without assistance. To alleviate this latter problem, some approaches (e.g., Davison, 1977, Camaren, 1975) have the questionnaire administered in a setting where questions can be read aloud and assistance provided as needed to those individuals with reading disadvantagements or handicapping conditions which limit their ability to complete the questionnaire by themselves.

One of the advantages of including current or former students in the needs assessment is that they will be able to express their needs in light of their experience with existing vocational education programs and supportive services. Problems which they have experienced might not be apparent to individuals who have yet to enroll in vocational programs, and thus those problems or needs could be underestimated by an assessment of the out-of-school populations' needs.

Whereas all of the approaches cited above produce data on an individualized basis, other procedures provide the State with aggregate data on the characteristics or needs of students representing special populations. Typically these approaches have local school officials provide information on the numbers of students who represent certain special needs categories, e.g., limited English-speaking ability, unable to do ordinary classwork, from low-income families, etc. While such data can provide valuable documentation on the characteristics of the students served, it is difficult to perform any analyses on aggregated data.

Approaches that ask educators or administrators to indicate their perceptions of the needs of special populations offer a relatively inexpensive and less time-consuming procedure for assessing needs. These approaches have in some cases relied on questionnaires to be completed by school officials, while in other situations a series of group meetings and discussions have served as the vehicle for determining needs. While this type of approach is frequently used to assess needs, it is inherently susceptible to the possibility of erroneous perceptions on the part of those individuals who are generalizing about the special populations' needs.

In planning vocational education programs it is always important to consider the employment opportunities available to program completers. For most special populations there is little reason to believe that the employment opportunities available to them upon completion of their education will be different from the opportunities available to other vocational students providing that program completion requirements are accurately matched to the skills required of entry-level employees. In these cases, the special needs students who complete the program will have the skills necessary for employment. Otherwise, the special needs students may complete the course but find themselves unable to meet the job requirements. Thus a critically important component of assessing the employment opportunities available to special populations is to identify the worker skills required by various occupations and to determine whether or not those skills can be acquired by individuals representing specific segments of special populations.

Efforts to match occupational duties and activities with the capabilities of special populations have focused primarily on the handicapped. The utility of such efforts has been greatest where distinctions were made between specific handicapping conditions, and where attention was given to a

variety of occupations related to various vocational programs. Unlike assessments of employment demand, the match between student capabilities and worker duties and activities appears to be generalizable across States. Thus, the results of previous and future efforts should be generally applicable providing that the job content remains relatively constant.

FORMULATION OF GOALS AND OBJECTIVES

The formulation of goals and objectives is a central component of the MERQ planning process. Goals are used to connote the basic intentions of the agency or organization, whereas objectives are the more specific, measurable outcomes which are necessary for goal achievement. Both goals and objectives provide direction in the delivery of services, but objectives are more specifically defined and their attainment is capable of being directly measured.

Ideally, vocational education goals for special populations are based on an assessment of population needs. As such, they represent the directions which vocational education should take in light of discrepancies between "what is" and "what ought to be" concerning the delivery of services to special populations. Once those directions are determined, objectives serve to quantify the outcome conditions that should be achieved in order to remedy discrepancies between the existing and desired states. After programs or activities have been implemented to better meet the needs of special populations, the objectives serve as bench marks against which progress can be measured and the effectiveness of activities can be judged.

In addition to their central role in the planning of vocational education for special populations, goals and objectives also serve to facilitate communication and coordination with those groups or agencies outside of vocational education. To State and local personnel in other agencies serving special populations, vocational education's goals and objectives provide a framework for improving the coordination of services. To the consumers of those services and the general public whose taxes pay for the services, the goals and objectives clarify what the State plans to achieve as a result of its programs, services and activities targeted at special populations.

Particularly in the case of special populations, multiple agencies are oftentimes involved in the provision of services which can complement those provided by vocational education. Because of this interdependency, the extent to which vocational education can expect to achieve its goals and objectives may likely depend upon communication and coordination with those agencies. CETA prime sponsors, Corrections, Mental Health, Special Education, Vocational Rehabilitation and other agencies can complement--or duplicate--some of the services to be provided by vocational education. Therefore, it is important that these agencies be informed of the goals and objectives of vocational education for special populations, and preferably that they be encouraged to participate in the process by which goals and objectives are developed.

The involvement of local education agencies in the development of goals and objectives is also important and in many instances may be critical to their subsequent attainment. Representatives of local education agencies may provide additional insight concerning the feasibility of suggested goals and objectives as a result of their experiences in serving individuals who have special needs. Furthermore, when the attainment of goals and objectives requires the support of local agency personnel, their commitment to achieving the objectives is likely to be enhanced by their involvement in the developmental process.

Participation on the part of consumers or the advocacy groups representing them can prove effective in developing goals and objectives which are responsive to the needs of special populations and the pertinent issues of concern to them. In many cases, their involvement can provide a means for gaining feedback on the suitability of alternative goals and objectives. In some instances the support of advocacy groups will be a prerequisite to the

success of vocational education's efforts, so it is vital that they be involved in the planning process.

As conceptualized in the MERQ model, goal development should include formulation of a preliminary set of goals, review of the goals by groups external to the formal education process, prioritization of a finalized list of goal statements, and dissemination of the prioritized goals to relevant agencies and groups within the State. The development of objectives is characterized by a similar set of activities with the exception of the prioritization process. Alternative means exist for incorporating these activities into the process by which goals and objectives are developed; those alternatives are discussed in the following section.

Goal Development Procedures

This section contains descriptions of procedures which have been or could be used by State agencies in the development of goals and objectives for special populations. While the section is entitled Goal Development Procedures, the techniques presented here are applicable to the formulation of both goals and objectives. In fact, the developmental processes used in formulating goals and objectives are oftentimes combined within a single procedure. Furthermore, the distinction between goals and objectives which the MERQ makes is not always adhered to in the field. Thus some procedures which have been used to develop objectives have resulted in statements that would appear to be goals since they are not directly measurable or do not contain a time-frame for their attainment. In this section the reader can assume that the procedures are applicable to both goals and objectives unless one or the other is specified. The differences in the processes are negligible if the participants realize the distinction between goals and objectives as

characterized in the MERQ planning model.

Formulation and/or Prioritization Procedures

In a project conducted for the U.S. Office of Education, Hughes and Rice (1978) designed a manual on planning procedures for mainstreaming the handicapped into vocational education programs. The manual was developed for use by local vocational education administrators but it also has applicability at the State level. Within the manual, the authors provide a sample structure for goal and objective statements. The structure which they recommend for goal statements is presented below in a format adapted for State level use.

The _____ through its _____
(title of agency) (agency component)

for _____ will _____
(whom/target population) (action verb)

_____ _____
(what) (for what general purpose)

Using the Hughes and Rice format, an example of a goal related to sex equity might read as follows:

> The State Vocational Education Agency, through its sex equity personnel, will provide vocational instructors and counselors with guidelines and technical assistance for the purposes of eliminating sex bias and discrimination in vocational education.

The sample structure which the authors recommend for objective statements differs from that for goals in that (1) the agency or personnel responsible for achievement of the objective is not specified, (2) the desired results are stated in more specific terms, and (3) a time-frame is included.

The structure which they recommend for objectives is presented below.

To _____ _____
(action verb) (what behavior/attitudes)

_____ _____
(of whom) (with what specific results)

_____.
(by when)

By using the above format in conjunction with the previously stated goal pertaining to sex discrimination, an objective for sex equity might read as follows:

> To increase the enrollment of women in non-traditional vocational programs to 50% by October, 1982.

The above objective, while only an example, serves to illustrate the greater degree of specificity and potential for measurement which differentiates objectives from goals. In an effort to further clarify the distinction between goals and objectives, Hughes and Rice included the following lists of action verbs for consideration during the development of goals and objectives.

Verbs Commonly Used with Goals	Verbs Commonly Used with Objectives	
provide	prepare	improve
promote	develop	prevent
increase	involve	reduce
decrease	inform	decrease
enable	access	
change	stimulate	
offer	change	
train	increase	

The authors recommend involving a planning committee in the development of goals and objectives. They suggest that the composition of the planning committee involve key persons representing those who will eventually be in-

volved in the implementation of the plan. Since the manual was written for local application, the persons suggested for membership on the committee are mostly school personnel. In an appendix to the manual, however, there is a list of organizations, institutions and agencies that might be helpful in providing State planners with assistance in developing goals and objectives for the handicapped. The types of organizations which they suggest include: Association for Retarded Citizens, United Cerebral Palsy Association, Rehabilitation Association, Easter Seal Society, Muscular Dystrophy Association, Association for the Deaf, Division of Vocational Rehabilitation and Division for Exceptional Children.

Workshop approaches to developing goals and objectives have been employed in a number of States. The Oregon Developmental Disabilities Council and the Research and Training Center in Mental Retardation at the University of Oregon collaborated on a Federally supported project to design a planning strategy for delivering educational services to developmentally disabled individuals. In a progress report on this project, Halpern, Fox and Nagle (1973) outlined the use of the DAP processes in identifying needs and formulating goals. The procedure was used within the context of general education, but has apparent applicability to vocational education. A necessary modification would be to ensure that participants in the planning process are representative of those individuals involved in the vocational education of the particular special population in question.

DAP is an acronym for a set of procedures used in problem solving. The letters denote three kinds of statements that are generated by participants in the process: 1) a designative statement of "what is," 2) an appraisive statement of "what is desired" and 3) a prescriptive statement of the proposed action for reducing the discrepancy between "what is" and "what is de-

sired." When considered in terms of the MERQ planning model, the designative and appraisive statements represent the needs assessment process; the prescriptive statement is the translation of those needs into goals.

The procedure is implemented in a workshop setting with participants representing various perspectives. The authors stress the importance of having spokespersons or members from special populations constituting a majority of the participants so that their needs and desires may be directly conveyed to the group. Other suggested participants include representatives from other agencies which are involved in the delivery of services to the special needs population(s).

During the workshop participants work together in small groups to generate statements that reflect current needs and desired outcomes based on perceived needs. (Note that this procedure does not require a separate assessment of needs.) The statement must follow a structured format which consists of a "referent" (the topic), the current state of being with respect to the referent, and the preferred state with respect to the referent. The goal statements are then finalized and prioritized on a consensual basis by all participants at the workshop.

A workshop approach was also used by Ellis Associates, Inc. (1978) to develop goals and objectives for sex equity in vocational education. A national EPDA workshop was conducted at which representatives from 15 states met to discuss the status and needs for achieving sex equity in vocational education. One component of the workshop was for the purpose of having representatives from each State produce an action plan containing priority goals and objectives for achieving sex equity in their respective States. Unfortunately, the specific procedures for accomplishing this were not described in the Ellis report.

A number of States have used the Delphi technique or a modified version of it to develop goals and objectives. An outline of the procedures used in one application of a modified Delphi is presented in a technical report prepared by the Research and Development Center of Roosevelt University in Chicago (Asser, et al., 1978). Under contract with the Illinois Office of Education, the Roosevelt University staff developed a five-year and annual State plan for achieving sex equity in vocational education within Illinois.

During the initial stages of the process a survey questionnaire was sent to national authorities on sex equity and vocational education as one of the means of assessing the needs for status achieving an equitable system in Illinois. The persons completing the questionnaire later served as the participants at a conference to set goals and objectives for sex equity in Illinois vocational education.

Conference participants were divided into groups to generate ideas for goals that were associated with the roles of administrator, counselor, employer, parent, teacher, and State agency staff member. The goals and objectives produced by these groups were the basis for a continuing Delphi process. After the conference, the list of goals and objectives were evaluated and summarized by the Roosevelt University staff. The results were then sent to the conference participants in the form of an Objectives Ranking Instrument. Respondents ranked the objectives in terms of their importance and temporal priority.

The final step in the Illinois goal and objective development process consisted of a synthesis of the data obtained from the workshop participants and from other sources. This synthesis was done by the Roosevelt University staff in conjunction with personnel from the Illinois Office of Education, and it resulted in the production of a plan for achieving sex equity.

A number of States have established separate committees such as task forces and planning councils for the development of goals and objectives. Typically, these committees serve to promote coordination with other State agencies and local educational agencies through regularly scheduled planning meetings. The committee serves to provide structure and focus to the group process approach for setting goals and objectives.

Other States utilize a "brainstorming" technique for developing goals and objectives. Various adaptations of this technique have been implemented. In some cases, goals and objectives are formulated by the coordinator responsible for the services provided to the special needs population; in other cases they are brainstormed by a section chief or supervisor. The goal and objective statements are typically submitted to someone in a higher echelon of the State planning structure for review and approval once they are developed. Input into these brainstorming processes is rarely documented in the literature, and as a result the mechanisms and coverage they involve is difficult to determine.

External Review and Feedback Process

Many of the procedures detailed above incorporate to some extent a review and feedback process. However, their essential function is the formulation of goals and objectives. Review and feedback is provided by planning committee members, including representatives from other State agencies, local agencies, consumer groups and advocacy groups. External review on a more comprehensive basis is generally accomplished by public hearings. Typically, a series of hearings are held regionally to provide all interested individuals with the opportunity to express their views relative to goals, programs, the allocation of responsibility for programs and the allocation

of resources. Public notice of the hearings is given throughout the various regions of the State to inform all segments of the population of the hearing sites and times.

Dissemination of the Finalized Goal and Objective Statements

Five-year State plans, including the finalized goals and objectives are required to be made reasonably available to the public. Public availability is generally assured by sending copies of the plan to various public and private sources such as State University libraries, ERIC centers, LEAs, State advisory councils, associations representing business and industry, governmental agencies, State boards of education, chambers of commerce and the general public upon request.

In addition to assuring public availability as mandated by the 1976 Vocational Education Amendments, some States have adopted the practice of publishing a "mini-plan" for circulation on a broader basis. The publication and dissemination of mini-plans are a move beyond compliance with the legislation. Through them, State agencies are able to disseminate widely a synopsis of their goals, objectives and planned activities in a format more readable and less expensive to produce than is the case with the complete plan.

Discussion

This section contains a comparative analysis of major goal-setting techniques according to four major dimensions of variability--structure, coordination, time and skill-requirements. A "structured" technique is defined here as one which possesses an explicit set of procedures for implementation. A highly structured goal- or objective-setting technique would then be one which delineates a sequence of activities or procedures that

must be followed in order to complete the developmental processes. Coordination is used to imply a participatory effort in goal- and objective-setting for special needs groups on the part of the State vocational education agency and other State agencies and advocacy groups that have relevancy for the particular special population in question. Time requirements include the amount of staff time and the length of calendar time necessary for setting goals and/or objectives according to a given technique. Skill requirements refer to the particular skills necessary for the implementation of the technique, i.e., the level of sophistication in the use of the technique.

Structure

The Delphi provides a considerable amount of structure within the goal- and objective-setting process. In its unmodified form, the Delphi utilizes a survey technique with a given step-wise format for completing the process. The Delphi lends itself easily to modification, as was evidenced in the development of the Illinois sex equity plan. The Delphi method facilitates the generation of goal and objective statements with greater practical, rather than theoretical, implications. This may be due to the fact that the goal and objective list undergoes several synthesization processes during which the goals and objectives are modified on a consensual basis. However, a consensual basis should not necessarily be equated with imagination or insight (Asser, op. cit., 1978).

The level of structure in the workshop techniques is not as well-defined as in the Delphi. In general, the nature of workshops implies a certain amount of structure in terms of time and location arrangements, a pre-determined agenda and prior selection of participants. However, the extent of the structure depends upon how workshops are adapted for use as a goals-set-

ting device. For example, the DAP processes (Halpern, Fox & Nagle, 1973) are implemented in a workshop setting and provide a significant amount of structure. The procedural steps and format of the goal statements are explicitly defined at the onset of the workshop. On the other hand, a workshop setting could be effectively used with no strong agenda or organized set of activities. Participants might be asked to engage in a general discussion of goals and objectives for special populations in order to provide input on the direction the State agency should take in providing quality vocational services.

Similarly, the nature of task forces allows variability in the structure imposed. The notion of a task force implies that a group of individuals are working on a defined problem, i.e., setting goals and objectives for a special population. Task forces are typically self-directed with members involved in varying degrees in structuring an approach to the problem of setting goals and objectives for special populations. This structuring can be accomplished at varying levels of intensity. Approaches to specific aspects of setting goals and/or objectives may either be delineated, or task force members can opt for developing a more general, skeletal approach to the task, leaving the specific details open-ended.

In-house brainstorming is not a highly organized activity. There is not a well-defined set of implementation procedures inherent to the technique. Typically, in-house brainstorming would result in the serendipitous generation of goals and objectives for special populations by one or more State agency personnel. As a result, the technique manifests a low degree of structure.

Coordination with External Agencies and Groups

The Delphi incorporates coordination with representatives of agencies or groups external to the State vocational education agency in the development of goals and objectives. Intrinsic in the design of the Delphi, questionnaire respondents are selected on the basis of their qualifications with respect to their knowledge and experience in serving that particular group. In contrast, task forces and workshops may vary contingent upon the extent to which coordination is structured into them. Membership of the task force or participants in the workshops can be selected to represent other State agencies, advocacy groups and consumer groups that have relevance for the particular special need groups being served or may be inclusive of only state vocational education agency personnel. Therefore, the extent of coordination depends upon the implementation strategy.

The preclusion of coordination with external agencies or groups is implicit in the term "in-house brainstorming." When implementing this technique, the State agency relies solely on its own personnel. Because in-house brainstorming is an internal process, it consequently excludes external coordination.

When coordination occurs in the development of goals and objectives for a special needs population, information may be obtained from a variety of sources with somewhat dissimilar backgrounds and experience with respect to that population. In cases such as these, planners should be aware of the possible necessity of weighting input based on the source from which it was obtained. This task can sometimes prove difficult and time consuming.

Time Requirements

Though the Delphi has distinct advantages, its use requires a considerable investment of time and resources. Resource requirements and other con-

straints are discussed by Delbecq, Van de Ven and Gustafson (1975) in their guide to using the Nominal Group and Delphi processes. Not only are there staff and participant time considerations, but a significant amount of calendar time must be available in order to implement the Delphi. The authors suggest 45 days as the minimal time required for the unmodified version. As modified by the Roosevelt University staff, the Delphi required a lesser amount of calendar time but more participant time.

Again, the time requirements of the workshop and task force techniques are dependent upon implementation strategies. The DAP processes which were implemented in a workshop setting as described in the procedures section can be completed in two days. However, it is conceivable that the development of goals and objectives will require a series of workshops which extend over a considerably longer period of time.

In-house brainstorming requires a relatively small expenditure of time. Little organizational preparation is necessary in implementing the technique. Input during the goal and objective development process is obtained from only one or a few individuals and therefore, requires significantly less time in obtaining that input and processing the information.

Skill Requirements

A critical element in utilizing the Delphi technique for developing goals and objectives for special need groups is having a staff member with experience in designing and conducting the procedure. It is also helpful for this individual to be knowledgeable about the special needs of a particular group. In addition, it is necessary to have support staff capable of taking care of organizational details, such as typing and mailing the questionnaires and scheduling meetings.

Typically, task force members are selected on the basis of skills they possess in goal and objective development and their knowledge concerning the status and needs of the special population for which the goals and objectives are being set. But selection criteria can vary with the circumstances surrounding the organization of the task force. Since task forces involve a self-directed goal development process, members often choose their own techniques for accomplishing their purpose. In many cases, the members need not be sophisticated in task force operations to use the technique. However, some experience in organizing and conducting a task force would be expected to facilitate the goal and objective development processes.

The level of expertise required for conducting a goal-setting workshop is contingent upon its format and structure. For instance, the workshop approach described by Halpern, Fox and Nagle (op. cit.) required that the workshop leader be skilled in the use of the DAP processes and be able to communicate this knowledge effectively to workshop participants. A less structured workshop situation places less emphasis on leadership skills.

Conducting a brainstorming session for developing goals and objectives for special needs groups requires relatively less group leadership skills. However, knowledge and experience of the special needs of the target group is essential for producing relevant goals and objectives during a brainstorming session.

The comparative analysis of the goal- and objective-setting procedures are summarized in Table 1. The procedures are rated as high, low or variable dependent upon the degree to which they manifest a specific dimensional characteristic.

Table 1 presents a graphic representation of the resource requirements and distinguishing characteristics of the procedures that have been or could

Table 1

Comparative Analysis of Goal- and Objective-Setting Techniques on Four Dimensions

Dimensions / Techniques	Distinguishing Characteristics		Resource Requirements	
	Structure	Coordination with External Agencies/Groups	Time Requirements	Skill Requirements
In-House Brainstorming	L	L	L	L
Task Force	V	V	V	V
Workshop	V	V	V	V
Delphi	H	H	H	H

LEGEND:

L = The technique manifests a relatively low level of the dimension.

H = The technique manifests a relatively high level of the dimension.

V = The technique varies along the dimension.

be used by State agencies to develop goals and objectives for special populations. It is anticipated that this table may assist State agency personnel in selecting the procedure that would be the most appropriate for their individual purposes. In determining which procedure best suits their needs, SVEAs would need to evaluate the procedures on those dimensions that have a major impact on their decision. Procedural requirements could then be matched with available resources in order to determine which technique has optimum desirability for their particular situation.

IDENTIFICATION OF PROGRAMS, SERVICES AND ACTIVITIES

The fifth component of the Management Evaluation Review of Quality (MERQ) in planning involves the identification of programs, services and activities necessary for the attainment of objectives, and the allocation of responsibility for the implementation of those activities. Programs, services and activities represent the strategies which are intended to facilitate the achievement of objectives targeted at special populations. They can include both State and local-level actions, such as the provision of inservice education to expand the skills of instructors teaching limited English-speaking persons, the provision of vocational instruction in correctional institutions, the development of guides to reduce sex bias in vocational counseling, etc. In most cases the identification of activities and the allocation of responsibility constitute two separate processes. Identification usually involves gathering information from various sources concerning alternative strategies for achieving specific objectives. Allocation of responsibility, on the other hand, is fundamentally a decision process which is based on information obtained in the identification phase as well as upon other considerations such as cost efficiency and differential needs and capabilities.

Objectives which are targeted at special populations are likely to represent new challenges to State and local agencies. Because the challenges are new, the programs, services and activities necessary for the attainment of objectives will rarely be obvious. In some instances there are likely to be divergent opinions within the State agency concerning the viability of various courses of action. In other situations there may be such a dearth of pertinent information within the State agency that few courses of action

are identifiable. Since the attainment of objectives will depend upon selection of the most appropriate programs, services and activities, it is extremely important that the State agency be able to identify and compare alternative strategies for achieving its objectives.

The identification of programs, services and activities for the achievement of objectives is but one part of this component. After the activities are identified, it is necessary to allocate responsibility for their implementation to the most appropriate level and type of agency or institution. The allocation of responsibility entails a designation of the agencies or institutions which will be eligible for funding to support the provision of those services, programs or activities necessary for the attainment of objectives. It is thus a prelude to funding which takes into consideration the capabilities of agencies and institutions and the characteristics of the populations they serve in light of the objectives targeted at special populations. The final determination of which agencies will provide the necessary services is made during the allocation of funds.

What is clearly called for is a systematic strategy for the identification and allocation of activities--a strategy which is capable of generating a range of alternative activities and takes into account the relative effectiveness of the alternatives. This requires more than the common practice of relying upon the subjective or intuitive judgments of those persons in decision-making positions (Eaddy & Eaddy, 1976). It requires the implementation of procedures which will provide those decision makers with a data base which will support their decisions. Those procedures which have been used by States to identify and allocate responsibility for activities are reviewed in the following sections.

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Procedures for Identifying Activities

Documented procedures for the identification of successful strategies for delivering vocational education to special populations fall into two major categories: survey techniques and structured group techniques. This categorization scheme is further expanded in Table 2. Entries within the table indicate instances where various techniques have been used to collect different types of information for identifying programs, services and activities to deliver vocational education to special populations. The discussion which follows is organized within the framework of Table 2. Survey techniques are discussed in the next subsection, followed by a discussion of structured group techniques. Approaches which use a combination of both techniques are described as they relate to either of the two.

Survey Techniques

Surveys have frequently been used to identify effective strategies for the delivery of vocational education to special populations. In reviewing documents describing such surveys, two major typologies emerged:

- Surveys of the perceptions of educators, administrators, students, etc. regarding the effectiveness of or need for various programmatic strategies; and
- Surveys of or site visits to exemplary programs to determine commonalities in program elements.

The next subsection discusses the first class of surveys. This is followed by a description of surveys of the second type.

Surveys of Perceptions

Surveys of the first type have been targeted to a number of the different special populations. A particularly exemplary approach, though not a State agency effort, was a study conducted by System Sciences, Inc. which

Table 2

Summary of Procedures Used to Collect
Information for Identifying Programs
Services and Activities

Techniques / Information Collected	Survey Techniques			Structured Group Techniques		
	Surveys of Perceptions		Surveys of Exemplary Programs	Workshops	Delphi	Force Field Analysis
	Structured Questionnaire	Open-ended Questionnaire				
Barriers to Special Populations	XX	XX				
Programmatic Needs	XX	XX		XX	XX	
Effective Delivery Approaches	XX		XX	XX	XX	XX

tested selected strategies to eliminate sex bias in vocational education programs (Rice and Etheridge, 1977). The study incorporated a multi-faceted approach to develop a list of State and local strategies effective in overcoming sex bias and sex stereotyping. The methodology included a survey of State agencies to determine the types of approaches used at the State level, which approaches are documented as viable means to induce change, trends in the approaches, and their relative effectiveness. Information was collected on each of these questions by mail and follow-up telephone calls, and was organized into a model program of State-level approaches. A second component of the study gathered information from local-level programs regarding trends in program types and their relative effectiveness and cost. Additionally, the project identified needs and barriers in terms of services to students in North Carolina by reviewing local sex bias elimination plans and conducting a survey of local administrators. The administrator assessment of need also included a ranking of types of technical assistance (e.g., workshops, checklists, guidelines) which would potentially be of use to local agencies. The surveys identified a variety of potential strategies useful at the State or local level, many of which are presented in Strategies to Eliminate Sex Stereotyping and Sex Bias: An Administrator's Manual (Rice and Etheridge, 1977a). Although the methodology was not without its limitations (e.g., local strategy cost and effectiveness data were not often available and seldom comparable), any of the four data collection approaches used could be adapted by State personnel to identify State and local activities for effectively delivering vocational education to any population.

Other survey methodologies employed to identify successful activities for serving populations have not been as broad in scope as the System Sciences study, but nonetheless produced useful planning information. Many of the

approaches were designed to collect information from LEA personnel as to their perceptions of effective or needed services. A particularly ambitious survey effort was conducted by the Special Needs Section of the Iowa Department of Public Instruction (Greenwood & Morley, 1977). The study surveyed 1,265 secondary-level vocational education instructors within the State to determine the present status of services being provided to handicapped and disadvantaged students and types of activities which the educators perceived would assist their efforts to serve these populations. Teachers were requested to rank five broad potential problem solutions: additional inservice training; additional manpower; additional planning time; additional equipment, supplies and space; and consultative services. Also, the respondents ranked types of activities within each of the broader categories as to their relative value as solutions to service problems. A parallel survey is currently being conducted with post-secondary instructors in Iowa.

System Sciences, Inc., in a project conducted for the U.S. Office of Education, also used a survey approach to identifying needs and barriers--in this case as they related to mainstreaming the handicapped in vocational programs (Hughes, 1978). The study included a survey of a sample of occupational education teachers and principals in North Carolina. Their perceptions were measured by a structured questionnaire consisting of 39 statements related to barriers, needs and attitudes toward mainstreaming. Consistency was found between the perceptions of principals and teachers, and the results were considered useful for program planning. The final report of the project includes recommendations for actions to be taken at the State and/or local levels to overcome identified barriers and needs and thus increase the success of vocational programs in serving handicapped students.

Similar approaches have been used in Wisconsin (Kumar, 1977; Tindall, 1977) and Texas (Salazar, 1976) to assess service needs of special populations. The Wisconsin study surveyed faculty members, counselors and supervisors within each of the State's VTAE districts. Perceptions as to the success of various teaching techniques and to barriers to program enrollment and completion for handicapped students were elicited from each of the respondents. A total of 66 statements related to teaching techniques and 120 barrier statements composed the questionnaire. Information collected on these items indicated a number of activities in which the State agency and the VTAE schools could engage in order to more effectively serve handicapped students. The approach utilized in Texas was similar to the Wisconsin study in that it collected perceptions of need from service individuals (bilingual program directors, vocational program directors, vocational counselors, secondary school counselors and industry representatives), yet different, since the need addressed was that of bilingual vocational programs. However, the results of this project were less conclusive, with recommendations consisting primarily of areas which require further research.

The methodologies in the last four referenced studies all employed a structured questionnaire for eliciting information from respondents. All of the forms contained statements of services, barriers or needs and requested respondents to rank the items in terms of their relative importance or to rate the extent to which respondents agreed or disagreed with the statement. These items were generated through a variety of means, such as literature searches, group consensus or preliminary surveys.

An alternative approach to obtaining input on effective strategies for delivering vocational education to special needs groups is an open-ended questionnaire. This technique, unlike the structured questionnaire, does

not limit the range of allowable responses. However, as the approach rapidly becomes costly as the sample size increases, the open-ended questionnaire has been used only in selected instances, and in most cases the surveys have been limited in scope. An example of a study which utilized an open-ended questionnaire is a project conducted for the Texas Education Agency (Fair, 1976). The purpose of tne project was to estimate the current status of vocational programs for special education students and to determine types of activities which would improve that status. For purposes of resolving the latter of the objectives, an open-ended question was included in a survey packet to Special Education and Vocational Education Directors across the State: "What type of services and/or programs are needed to enable more special education students to enroll in regular and/or special vocational education programs? Please be specific as possible." Included with the question were five examples of possible services. Each of the five examples was considered by the directors to be potentially effective for serving special education students. Five additional successful activities were also suggested. Thus, though the "questionnaire" was extremely simple in design, it was capable of eliciting some useful planning information.

The earlier referenced Kumar (1977) study in Wisconsin also employed an open-ended component as a part of the survey approach. Following a search of the literature to identify classes of barriers and successful teaching techniques, interviews were held with vocational-technical institute staff to identify their perceptions of barriers and strategies within each of the categories defined in the literature. Respondents were encouraged to suggest barriers to and services for a variety of handicapping conditions. The results of these preliminary interviews then served as the basis for the structured survey discussed earlier.

Schneck and his associates (1978) used an interesting combination of the structured and open-ended approaches in a matrix format to assess the service need requirements of handicapped and disadvantaged students in vocational-technical education programs in Minnesota. One dimension of the survey matrix consisted of 14 categories of modifications or special services (space was provided for "other" direct support services and "other" indirect support services). The approach was unique in that the second dimension of the matrix was composed of different types of handicaps and disadvantagements and education levels. This is the only study found in the literature which collected information on service needs at that level of detail. The survey instrument was administered to a small group of educational professionals with experience in working with the handicapped and/or disadvantaged having vocational training problems. The respondents filled in the cells of the matrix indicating whether the service was a (1) probable program need, (2) a possible program need or (3) not a need for each of the handicapping/disadvantaging conditions. Though the study did not investigate such factors as the scope and extent of services needed, it represents a potentially useful approach to identifying needs and programmatic activities. Results from such an approach would indicate services which are needed across conditions in addition to services which are specific to one particular handicap or disadvantagement. Such information could prove quite useful in efficient program design.

All of the above procedures have surveyed educators or other knowledgeable individuals to obtain their perceptions of needed and or effective services for delivering vocational education to special needs groups. Another source of input, though less frequently sampled, is the student population itself. Two projects conducted in Wisconsin have made use of student input.

Both studies surveyed past and present vocational education special needs students; one was addressed to programmatic needs of the handicapped (Ray, undated), the other, those of women who make mid-career changes (Nero, 1975). Based on their own experiences in vocational-technical programs, students were able to make innovative yet realistic recommendations for improving existing services/programs for their respective special populations. More importantly the studies reveal an often overlooked source of input for identifying useful activities.

Surveys of Exemplary Programs

The second major type of survey technique used to identify effective strategies for delivering vocational education to special populations is the survey of or site visit to exemplary programs. The rationale for this type of approach is based on the assumption that elements of effective programs would also be successful in other programs with similar environmental/student characteristics. Information gained from the site visits can thus be used for program planning in other areas.

As this technique generally involves the expenditure of a great deal of time and resources, the approach is rarely used by State agencies. However, two such studies have been conducted of successful programs for the disadvantaged and ethnic minorities by the Pennsylvania and California Departments of Education, respectively (Wircenski and Phelps, 1978; Contemporary Research Incorporated, 1974). Also, some representative studies supported by the Federal government are reported here, not for purposes of providing a procedural model for the States, but rather to illustrate that the results of such studies often represent valuable resource documents for program planning.

Both the California and Pennsylvania studies sought nominations from knowledgeable individuals in the fields. The approaches differed, however, in that Pennsylvania elected to sample a relatively large number of programs (92) and use a mailed survey questionnaire, while the study in California selected only 14 exemplary programs and conducted on-site visits. Where the larger sample may provide more representative data, the on-site visits allow for more in-depth and unanticipated information. Thus each of the approaches has its limitations, but an on-site approach with a large sample would be excessively costly for a State budget. The California study identified successful strategies, techniques and other program components for the recruitment and training of ethnic minority groups. The study supported by Pennsylvania also identified program characteristics representative of the most innovative approaches being used throughout the nation. In particular, the study focused on identification and assessment procedures, programming, and staffing patterns. Data collected from studies such as these can be used by States to provide direction to local programming and also to indicate specific areas for program/services improvement.

As mentioned earlier, Federal Part C grants have supported the great majority of studies of this type. Some examples of such projects are a study of exemplary approaches to mainstreaming the handicapped (Dahl and Lipe, 1978), a project to identify activities which would encourage women to enter occupational areas traditionally limited to men (Lewis & Kaltreider, 1976), and a study of exemplary programs for serving the disadvantaged (Parsons, et. al., 1975).

The Dahl study used a mail survey to gather information from nominated exemplary programs. The questionnaire requested information from administrators, teachers, counselors and placement personnel as to which of their ap-

proaches to mainstreaming could be duplicated by other programs (e.g., roles of staff, instructional techniques, student goals). A unique (and useful) component of this project is that the results were compiled into a Mainstreaming Guidebook for Vocational Educators (Dahl, et. al., 1978). The guidebook includes ways of overcoming six major categories of barriers to mainstreaming and thus constitutes a valuable resource for program planners.

The project conducted by Lewis and his associates also used nominations to select programs for site visiting, but programs meeting the project definition of exemplary were found to be non-existent. Based on revised, more liberal criteria for selection, ten schools were included in the project sample. Through the site visits to schools, interviews were conducted with administrators, teachers, other staff and students. Additionally, observations were made of classes and a questionnaire administered to current and former students. The final report of the project includes recommendations of activities for a variety of program components that could be used as input by program designers.

The final study to be discussed, the Parsons study of exemplary programs for the disadvantaged, included both a mail survey of program administrators and site visits to a limited number of particularly outstanding programs. The surveys obtained a variety of information on a number of program input elements and outcome measures. Additionally, administrators and staff ranked all program components and elements of each component in terms of their relative effectiveness in programs for disadvantaged students. The analyses also included an investigation of the relationships between program inputs and outcome measures. Thus the study not only identified elements of successful programs, but also measured the perceived relative importance of the elements and their relationships to outcomes.

As inferred earlier, studies employing this type of methodology are generally large undertakings and not necessarily a model approach for a State to follow. However, the study results are knowledge bases which could be used by State agencies for identifying areas for technical assistance, encouraging local activities and services, or the establishment of priorities. This could also be the case for the other types of survey techniques discussed. Many of the activities identified through the more ambitious studies are generalizable to other State or local programs. Many of the same programmatic obstacles exist nationwide, and potential solutions are offered in many of the documents described. However, it should be made clear that there also are numerous differences among the States, such as political structure, personnel resources, employment opportunities and population characteristics, to name a few. These differences should be taken into account before generalizing from the results of another State's data collection effort to one's own system.

Structured Group Techniques

The second class of procedures for identifying strategies for delivering vocational education to special populations is structured group techniques. Frequently the identification of activities is conducted through a group process involving a number of group members with various types of expertise. In most cases this is an informal session involving representatives from the State vocational education agency and occasionally professionals from outside groups or agencies. A somewhat more structured approach which is commonly used is the workshop, where input can be obtained from local education agency personnel, other State agencies, or outside groups. At the local level the workshop serves more of an inservice training function, but informa-

tion can flow both ways. For example, Ohio conducted inservice training workshops for local instructors and included as a component of the workshop small group sessions with four structured questions to elicit suggestions for program improvement (Macer, 1977). Recommendations for improvement were obtained within each of the four areas. An example of this approach used across States is a workshop sponsored by the U.S. Office of Education for three-member teams of vocational educators from 15 selected States (Ellis Associates, Inc., 1978). The purpose of the workshop was to develop action models to eliminate sex stereotyping and sex bias from vocational education. During the workshop each of the State teams developed a status report and action plan for sex equity in their respective States. Then the teams assembled in groups to identify the most essential activities for meeting sex equity legislative mandates. The results of the workshop were compiled by the project team into a handbook of State accomplishment and action plans. As evidenced by the results of these two workshops, this approach can be useful not only for providing information but also for obtaining input.

There are limited instances where an even more structured group approach has been utilized by a State to identify activities. One such technique which has been used successfully is the Delphi. Kentucky employed a traditional Delphi approach in addressing future needs and barriers in vocational education (McClellan, 1977). The first round questionnaire included questions related to a number of financial, social, political and technological issues, two of which had special needs as a concern: "How can occupational education better meet the needs of minorities, disadvantaged and handicapped?" and "Should everyone have greater access to occupational education than they presently have?" Responses to these and eight other questions were tabulated and feedback was provided for response in a second round. Those items with

less than 90% agreement after this round were then included in a third questionnaire. The approach did prove useful in eliciting input from a variety of State and local vocational educational, legal and political staff. Though the responses were couched in fairly general terms (e.g., creating awareness, screening the skills of the handicapped, disadvantaged, and minorities), they do pinpoint areas where there is a consensus of concern.

A modified Delphi approach in an assembled group setting has been used in Illinois to develop a five-year plan for sex equity (Asser, et. al., 1978). The procedure has been discussed in some detail in the goals and objectives section of this report, but it essentially involved providing input to a groups of experts, breaking into small group discussions, providing feedback of results, expert ranking of results, and reassembly two months later for further discussion and refinement. The results of these small group sessions and an extensive literature review then formed the basis for a draft plan of goals, objectives, and activities to achieve sex equity in vocational education in Illinois.

One final document to be discussed is a procedural guide developed by System Sciences for use by local administrators in planning for mainstreaming the handicapped (Hughes and Rice, 1978, 1978a). Though the procedures developed by Hughes and Rice are targeted for local use, they are also applicable at the State level. In addition to providing techniques for needs assessment and goal and objective development, the guide suggests five alternatives for generating strategies to meet objectives: 1) use of experience or the experience of others; 2) research the literature for successful approaches; 3) ask the consumers or potential consumers; 4) obtain input from other program areas with similar goals and objectives; and 5) brain-

storm with other staff members. An example of strategy creation is also included. The guide advocates generating at least three strategies or sets of strategies per objective and then presents a method for strategy selection. The selection process involves applying four sets of criteria to the alternatives--constraints and resources, general selection criteria, costs, and outcomes--and evaluating them through Force Field Analysis. Force Field Analysis is a group technique whereby members produce a list of forces for and forces against each strategy (or goal or objective). The lists of forces, coupled with the selection criteria then provide a basis for the selection or rejection of alternative strategies. Though this procedure does represent a decision process which is often used in the informal selection of strategies, it is useful for decision makers to conceptualize and formalize the process and consider input which may in the past have been overlooked or neglected.

This concludes the discussion of procedures for the identification of activities for delivering vocational education to special populations. Comparisons of the alternative techniques in terms of their strengths and limitations are provided in the summary of this section, which immediately follows the next subsection. The next subsection addresses the second key activity of this MERQ planning component--the allocation of responsibility for implementing the identified programs, services and activities.

Procedures for Allocating Responsibility

The second procedural step of this MERQ planning component involves allocating responsibility for implementing those programs, services and activities which have been identified as potentially successful for delivering vocational education to special populations. As mentioned earlier, it is pri-

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marily a decision step, that of deciding where the greatest needs lie and who within areas of need is most qualified to deliver a particular type of service. The step involves a comparison of "what is needed" and "what is" and an attempt to narrow the difference through the allocation of additional programs, services or activities. Thus the process requires data on differential needs, facilities and staff capabilities, and alternative activities in terms of the ability of the activities to meet particular population needs and the resource requirements of the activities.

Implementation of state-wide decisions of this nature requires a data base and centralized authority position not often afforded State vocational education agencies. In lieu of such a comprehensive information system, State planners base decisions on alternative data sources. For example, in States with a high degree of local autonomy, local education agencies generally decide what services they wish to provide their students. The States' roles in such cases are to provide technical assistance through on-site consulting or application guidelines to the LEAs. Information is provided to the locals on the activities which have been identified as successful, and LEAs are encouraged to apply for activities suited to the needs of the potential student population. The State reviews proposals or applications based on any number of evaluative criteria. These same criteria are then often used to determine the level of funding for the implementation of allocated activities and are thus discussed in more detail in the next chapter of this report.

The allocation of responsibility is essentially an undocumented procedure. Many States publish guidelines for serving special populations, checklists to determine where services are needed and criteria for the evaluation of proposals for specific activities. However, a coordinated approach for

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satisfying state-wide needs is generally not used and certainly not documented. This is not to imply a consistent lack of commitment on the part of the States for serving special populations. Rather, it is a new area for which needed planning data and grass roots support are not always available. Changes in programmatic emphases take time and considerable public relations activities to stimulate interest and a sense of commitment.

Discussion

The techniques utilized to identify potentially successful activities for delivering vocational education to special populations represent a myriad of procedures with little in common other than that they have generally entailed obtaining a consensus of expert opinion. Such approaches as surveys, site visits and structured group techniques have been used to elicit input from administrators, educators, students, representatives of special interest groups or other service agencies. Each of the techniques has its particular strengths and weaknesses, yet all can be useful in identifying activities for serving special populations.

Surveys have frequently been employed to identify effective activities. A major distinction between the various approaches is the format of questionnaire for eliciting information from respondents. One type of format is the structured questionnaire, which contains statements of services, barriers or needs and requests respondents to rank the items in terms of their relative importance or to rate the extent to which respondents agree or disagree with each statement. Such an approach has a number of advantages. First of all, it is easier and less time-consuming for respondents to complete a structured questionnaire than one with open-ended questions. What is expected of the respondents is often clearer using a structured format. Also, it is easier

to tabulate and analyze the responses to this type of survey form. However, there are limitations associated with this approach. The major problem is that the boundaries of input are defined. That is, the approach limits the alternative activities which can be identified to those specified by the researcher. In the case of vocational education for special populations, there are many opinions as to what constitutes effective services. Therefore, it is difficult for a structured questionnaire to be all-inclusive of potentially effective services. The extent to which this becomes a problem depends upon how a structured questionnaire is developed. Each of the studies referenced used a variety of sources of expertise to develop the survey instruments. For example, the Hughes (1978) study utilized the Delphi Technique with local vocational education administrators to define the content base for the questionnaire. The Iowa questionnaire, on the other hand, was developed from input of State-level program area consultants and reviewed by ten vocational education teachers (Greenwood & Morley, 1977). The studies thus include substantial input in their development and as a result allow for a variety of responses. However, by their nature and dependent on the ways in which they are developed, structured questionnaires can inhibit improvement in the state of the art by not allowing for innovative or nontraditional input on the part of respondents.

Inherent in the quality aspect of the MERQ for planning is a striving for innovation in the delivery of services. Both the open-ended questionnaire and the Delphi are capable of eliciting innovative input regarding services to special populations. The open-ended questionnaire is useful in that it does not limit the range of allowable responses. However, this approach also has its disadvantages. It is difficult to clarify the types of information requested without providing some types of examples (thus, again provid-

ing the respondent with a limited frame of reference). An unstructured questionnaire is most suited to a personal interview setting where a trained interviewer can probe for related or additional information. As this is time consuming on the parts of both the interviewer and the interviewee, the approach rapidly becomes costly as the sample size increases.

The Delphi Technique, which is a future-oriented tool, is also designed to capture imaginative input. The primary strengths and limitations of the Delphi have been described earlier, thus they will not be discussed in detail here. Suffice it to say that the Delphi Technique has been and is being used successfully to identify service mechanisms for deliveromg vocational education to special populations. The critical factor is the sample. Given sufficient representative and innovative input, the technique can be quite effective as a planning tool.

Surveys of or site visits to exemplary programs is another technique used to identify activities for serving special populations. If effective programs exist, such an approach can be useful in providing models for program development. However, input to program development is based on what is currently in operation. As was discovered by Lewis and his associates (1976), what is in operation is not always exemplary. Another potential difficulty in utilizing the results of such studies is the generalizability of the characteristics of exemplary programs to other programs. Vocational education programs have differing environmental as well as student traits. Differences along any one of a number of environmental or student dimensions could inhibit the success of an exemplary service in a new setting. The approach also has strengths. On-site visits are particularly useful in obtaining in-depth and unanticipated information. Characteristics of effective programs can be observed and adapted to meet service needs of other programs. Additionally,

with caution, the results of national studies can be useful in developing programs for target populations.

A characteristic of many of the techniques presented is the prioritization of identified activities, that is, obtaining information over and above what is needed, to what is needed most (or what would work best). Prioritization was an intrinsic component of most of the survey procedures which requested a ranking or rating of activities. In effect, the prioritization constituted the identification of activities. That is, given a range of potentially effective strategies (as defined in the literature or from other sources of input), indicating which would be the most effective is in a sense identifying successful activities in addition to providing a means for selecting from among the alternatives. The Delphi can also include a priority component, as was evidenced in its use in Illinois (Asser, op. cit., 1978). In fact, such a component could be easily added to any of the identification strategies, and with sufficient representative input from local agencies could also provide for substate differences in priorities.

The relative effectiveness of the foregoing techniques is dependent both upon the quality of the process (e.g., instrumentation, experience of interviewers) and the quality of the input (e.g., size and range of sample). The degree to which a level of quality is achieved is affected not only by commitment but also by a State's particular needs, resources and political structure. The most effective technique would be that most suited to these constraints. For example, a State may have the following characteristics:

- Large number of educators qualified in serving special populations;
- Evidence of a number of programs proven successful in serving special populations;
- A research coordinating unit with expertise in survey design;

- A large research and development budget; and
- Evidence of unmet needs in certain areas of the State.

Such a State may choose to survey or site visit successful programs. Input from educators and the program design could then serve as a model for program development in unserviced areas of the State. On the other hand, a State with less expertise in serving special populations and less evidence of need may elect to obtain input from professionals in other States by using a comparatively less expensive technique such as the Delphi. Thus, although each of the procedures used to identify vocational education delivery mechanisms for serving special populations has limitations, these should not be overemphasized. Each of the procedures has its value in that it represents an attempt to obtain otherwise unknown information. Which procedure is the more effective for a particular State is dependent on that State's resources and research needs.

RESOURCE ALLOCATION

The final planning component deals with the allocation of Federal resources to eligible recipients assigned responsibility for programs, services and activities. Allocation as a component of the MERQ model is envisioned as a two-phased process. The first phase involves the equitable allocation of funds across eligible recipients through use of an objective allocation formula. The allocation formula is to take into consideration such local conditions as relative financial ability, number of low-income families or individuals, dropout and unemployment rates, and number of persons having special needs. In the second phase, an eligible recipient's allocated funds are budgeted through the approval process to specific programs, services, and activities. The budgeting process is to be based on such factors as priority of goals addressed by the programs, services, and activities; and number of persons representing special populations to be served annually.

This formulation of the allocative process is consistent with the Vocational Education Act of 1963, as amended, and accompanying regulations which stress the importance of serving persons with special needs. In particular, the legislation provides for the needs of special populations through authorizations of categorical funds in Part A, Subparts 2, 3 and 4 and Part B, Subpart 3 which can be budgeted for multiple purposes. The legislative requirements concerning resource allocation are congruent with current educational finance theory. Contemporary theorists cite four essential elements that a comprehensive and equitable State school financing system should consider: local financial ability, local tax effort, educational needs, and delivery costs (Alexander & Jordan, 1976).

Each of these elements is explicitly or implicitly addressed in the current legislation. Relative financial ability is identified in the legislation as one of the two most important factors in determining allocation amounts. The intent is to ensure that areas in need of vocational education are not deprived of the opportunity simply because they lack the ability to provide the necessary financial support. In recognition that reasonable effort should be rewarded, the legislation specifically precludes the denial of funds to any recipient making a reasonable tax effort solely because the recipient is unable to pay the non-Federal portion of the cost of new programs. Allocation of funds to serve the individual educational needs of all persons is achieved through authorization of Federal funds to be used to pay for the added costs of serving the disadvantaged and handicapped and to launch a variety of efforts designed to provide enhanced access to an expanded clientele. Although variability of costs or a function of geographic location is not explicity addressed in the legislation, allowance is made for the inclusion of unspecified "economic" factors in the allocation of available funds.

The legislation and associated regulations establish constraints within which the States are to allocate Federal funds to be used for special populations. The guidelines do not define explicit allocation procedures, however. Each State retains sufficient flexibility to design procedures fitted to its own needs. The next section will examine the resource allocation procedures the States have developed. In a subsequent section, State procedures for approval of local applications will be reviewed. The final section of this chapter will discuss the strengths and limitations of the reviewed procedures.

Resource Allocation Procedures

Documentation of State resource allocation procedures for special populations is primarily to be found in State Plans. As a result, a sample of 21 five-year State Plans were reviewed. The Plans selected for review covered a representation of States with respect to geography and urban/rural characteristics.

The results were notable in two respects. First, they demonstrate each State's flexibility in developing or adapting allocation procedures tailored to its own planning philosophy, requirements, and limitations. None of the States reviewed base their allocations on the same set of factors. Second, although the procedures varied widely in content, they can be grouped into two basic generic methods: the formula method and the project method.

Formula Method

The formula method is used to allocate block grant funds to eligible recipients at the local level. The block grants are not allotted to individual programs, services, or activities, but rather are allocated to support a local eligible recipient's efforts in accordance with specific categorical grant purpose, e.g., vocational education for the handicapped. The recipient's discretion to develop individual programs, services, and activities to fulfill the purpose is not restricted by the allocation procedure. The allocations serve essentially as budgetary authorizations for local categorical expenditures.

The formula method allocates funds on the basis of an applicant's relative (to other applicants') standing on several factors. These factors generally include some indicators of financial ability and concentration of

low-income families as well as other social, economic, and demographic variables. Representative factors used by the States to allocate special population funds are presented in Table 3. These factors are classified according to whether they are socioeconomic, district demographic, or program/school demographic.

The nature and use of the formula method varies across States. The number of factors used in the allocation of Federal funds ranged from three to ten. The procedures for considering special needs populations and the Subparts to which the formulas are applied also differed among the States. Some States allocate block grant funds according to a single allocation formula. In thoses cases, the factors included in the formula differ in the degree to which they directly reflect special population needs. Factors such as number of AFDC families, per capita income and assessed property value per student enrolled, for example, are a more indirect measure of the disadvantaged need than, say, the number of limited English-speaking persons 18-64. Relatively few States using a single allocation formula included in their formula what might be considered as direct measures of special population needs.

Other States have developed distinct allocation formulas for separate categorical sub-parts and set-asides. In these instances, separate formulas may be used to allocate the handicapped set-aside funds, the disadvantaged set-aside funds, program improvement funds, and disadvantaged special program funds. Typically, a State will use several common or core factors in each formula. A unique factor which directly measures the applicant's need for each type of fund will be added for each particular legislative purpose. These unique factors generally consist of community or programmatic demographic measures of the special populations' needs.

Table 3

Sample of Factors Used by States to Allocate
Federal Special Population Funds

Socioeconomic	District Demographic
Assessed property value	Number of Handicapped Persons 18-64
Number of AFDC families	Number of limited English-speaking
Labor force growth rate	
Unemployment rate	
Youth unemployment rate	
Relative district cost	**Program/School Demographic**
Manpower needs	Number of handicapped persons in Grades 7-12
Excess costs	Vocational average daily attendance
Operational mill rate	Disadvantaged enrollment
Cost per FTE student	Consumer and homemaking enrollment
Per capita income	Dropout rate
Orshansky Poverty Index	Program type
Number of low-income students	Program age
Wealth per student	Vocational student organization opportunities available
Voc. ed. expenditure/pupil	Population to be served
Education expenditure/pupil	Program role stereotype orientation
Assessed property value/student enrollment	Post-secondary and adult enrollments
Number of low-income families	Vocational enrollment (Grades 9-12)
State appropriation/FTE student	Vocational handicapped enrollment
Percent of tuition increase	
Percent of Black enrollees	
Percent of Hispanic enrollment	

An example typifing this usage is shown in Table 4. Three of the factors are the same in each formula. A fourth unique factor is added to each formula to tailor the formula to type of categorical funds to be allocated.

The formula method can be divided into two approaches: the variable-allotment approach and the variable-reimbursement ratio approach. The two approaches are similar in that the same types of factors are employed in each. Both approaches allow for the weighting of factors to reflect their relative importance. The approaches differ in the results yielded. The variable-allotment formula yields dollar allocations to eligible applications; the variable-reimbursement ratio yields an allowable proportion of costs that will be reimbursed.

Variable-allotment approach

In the variable-allotment approach, differential amounts of funds are allotted to the recipients according to each recipient's relative need. Two alternative techniques are typically used by States to determine an eligible recipient's allocation. The first technique entails a) weighting the factors in a formula; b) awarding the recipient points on the basis of formula factors which measure the need for funds; c) totaling the points across all eligible recipients in the State; d) dividing the eligible recipient's point total by the State point total; and e) multiplying the total dollar amount to be allocated across the State by the percentage figure obtained in step d). The amount allocated to a specific applicant is computed according to the following formula:

$$\text{Applicant's Allocation} = \frac{\text{Applicant's Point Total}}{\text{State Point Total}} \times \text{State Allocation}$$

Table 4

An Example of Factors
Used in Specific Allocation Formulas

Factors Included in Each Formula

Source of Funds	Common Factors		Unique Factor
Subparts 2 (20% set-aside) and 4	AFDC, LES/NES, RFA	and	Vocational Disadvantaged Enrollment
Subpart 2(10% set-aside)	AFDC, LES/NES, RFA	and	Vocational Handicapped Enrollment
Subpart 5	AFDC, LES/NES, RFA	and	Consumer and Homemaking Education Enrollment

AFDC = Number of families receiving Aid to Families with Dependent Children

LES/NES = Number of student with limited or non-English-speaking ability

RFA = Relative financial ability (based on a district's assessed property valuation)

Allocations obtained using the second technique are based on a recipient's proportion of the State's total on each of a set of factors. Typically, the proportions are weighted, the weighted proportions added across factors, and the weighted sum multiplied by the State allocation for that categorical purpose to arrive at the allocation. This approach is illustrated by the following formula:

$$\text{District Allocation} = w_1 \frac{\text{District AFDC}}{\text{State AFDC}} + w_2 \frac{\text{District Financial Ability}}{\text{State Financial Ability}} + w_3 \frac{\text{District Disadvantaged}}{\text{State Disadvantaged}} \times \text{State Allocation}$$

where w_i refers to factor weights. Weights are generally chosen so that $\sum_{i=1}^{N} w_i = 1$, where N is the number of factors in the allocation formula.

Variable-ratio approach

The variable-ratio approach yields a reimbursement ratio for each eligible recipient. The ratio represents the maximum allowable percentage of a recipient's costs to be reimbursed with Federal funds. This approach consists of (a) awarding points to each eligible recipient on the basis of factors indicating need; (b) averaging points across recipients; (c) establishing a base reimbursement percentage to correspond with the average number of points obtained in Step (b); and (d) calculating a recipient's reimbursement rate according to the formula:

$$\text{Reimbursement Ratio (\%)} = \frac{\text{Recipient Point Total}}{\text{Average Point Total}} \times \text{Base Reimbursement (\%)}.$$

Thus, those recipients with a higher than average number of "need points" receive more than the average reimbursement rate would allocate. For example, where:

State Average Point Total is 15.0
Jones County Point Total is 16.1, and
Base Reimbursement Percentage is 50%,

the percentage of program costs incurred by Jones County to be reimbursed by Federal funds is

$$53.7\% = \frac{16.1}{15.0} \times 50\%$$

Project Method

A second fund allocation procedure used by States is the project method in which eligible recipients compete for limited funds on the basis of individual project proposals. The project method allots funds to eligible recipients for specific programs, services, or activities. To identify projects to be funded, some States issue requests for proposals on specific topics; other States allow the applicants more latitude, restricting the focus of proposals only by legislative proscription and State goals.

The project method utilizes the same type of factors as the formula method. The factors are used as criteria in the evaluation process to select projects to be funded. In some instances the States also use the factors to establish an applicant priority list for project funding on the basis of the factors. For example, one State gives first consideration to those school districts which have a three-year dropout average of 150, are located in counties having a higher than state average unemployment rate, and have at least 2,000 youths unemployed.

The project method is most frequently used to distribute Part A: Subparts III and IV funds, and, to a lesser extent, Subpart V monies. It is

also used to re-allocate Part A, Subpart II funds which were allocated through the formula method, but were not applied for by the potential recipient.

Resource Budgeting Procedures

The final stage in the MERQ planning process is the budgeting of funds to eligible recipients to be expended in carrying out planned programs, services and activities. The application approval process as it currently functions serves a double purpose. First, by granting approval to expend resources, the process functions indirectly to assign responsibility for offering specific programs, services and activities considered necessary for achievement of State objectives. Secondly, by approving the anticipated local expenditures by object and/or activity codes, the approval process indirectly budgets funds to eligible recipients.

A variety of criteria appear to be used by the States in their review of local funding applications. Many States interpret the legislation quite literally and base their reviews primarily on specifically mentioned factors to be taken into consideration in approval of local applications; i.e., economically depressed areas, high unemployment rates, inability to provide resources, job opportunities and new and emerging programs. Other States go beyond the mandated factors and include criteria that reflect the legislative intent but are not specifically mentioned as requirements for local applications. For example, some States list as funding criteria that local applications are to be developed in consultation with representatives from area educational and training resources, to describe vocational education needs of potential students, and to incorporate evaluation findings. A few States utilize a more comprehensive set of review criteria that in

addition to more broadly-based legislative factors include reference to programmatic considerations such as relevancy of proposed program to State goals, adequacy of facilities, and program placement rates.

The procedures followed in State approval of local applications are largely undocumented. Some States simply report that they give priority consideration to those applications manifesting designated criteria factors but do not describe how the priorities are assigned. Other States purportedly use the mandated factors to establish a rank-order listing of applicants. It is generally unclear, however, what specific criteria factors are taken into account in the approval process, how the criteria are operationally defined and measured, whether factors are weighted differentially, how the ratings are combined across factors to obtain a priority score for an application, and how priority scores are used in funding decisions.

In contrast, one State reported reviewing applications on a project basis. Each project is rated on eight criteria using a quantitative rating scale. The minimum score for an acceptable project is defined. The rated applications are submitted to a council for resolution of differences between an applicant's project priorities (each applicant prioritizes its projects) and the State's priorities. Available funds and legislative intent are the two considerations used to resolve differences. The council's recommendations for grant awards/contracts to individual projects are submitted to the State Director for final determination.

With the above exception, analysis of State Plans failed to disclose whether the respective States reviewed applications in their totality, by program area, or by specific programs. Several of the States appeared to consider individual programs within an application. Another State seemed

to review applications by program area. However, the majority of those States reviewed described their approval process only in terms of the total application. Thus, the inference is uncertain as to the administrative level to which these States budget funds to programs, services and activities.

The relationship between the approval and allocation process is also generally not well-documented. Many States appear to use one set of factors to establish application priorities and a separate set of factors to allocate Federal funds. The significance of the priority assignment in the approval process is indeterminate given that funds are allocated in an independent procedure. The relation between an application's priority and the likelihood and amount of Federal funds actually received is seldom made explicit.

Discussion

The foregoing section described a variety of allocation procedures employed by the States. Though the allocation procedures currently being used are marked by individuality, each of the basic types have properties that result in inherent strengths and limitations. These properties will be discussed for the two variants of the formula method (variable-allotment and variable-reimbursement ratio) and the project method.

A principal advantage of the variable-allotment approach stems from the fact that the procedure allocates an exact dollar allotment. Eligible recipients can therefore be informed in the early stages of their planning cycle of the amount of their Federal entitlement. This information provides a base expectation for the amount of available resources. Since a recipient's measure on the formula factors typically will not change significant-

ly from one year to the next, local planners can estimate their future funding levels with greater confidence. This knowledge enhances the prospects for effective long-term planning.

The variable-reimbursement ratio approach, in comparison, does not allocate a fixed amount of Federal support. Rather, each recipient is informed of the allowable proportion of program expenditures reimbursable with Federal funds. Since the dollar amount of Federal assistance received increases in direct proportion to the amount of local funds committed, there is a direct incentive to spend local/State dollars. The more local funds a recipient is willing and able to expend, the more Federal dollars a recipient is eligible to receive.

Because no restriction is generally placed on the amount of Federal support an eligible recipient is entitled to receive, the only constraint theoretically is the amount an eligible recipient is willing to spend to attract Federal funds. This seeming absence of a ceiling is illusionary, in a sense, for all recipients are applying for a limited pool of funds. While eligible recipients can be given a Federal reimbursement ratio for planning purposes, this figure is not firm until all applications are received and reviewed to ensure that the total application fund requests do not exceed the State's allotment of Federal funds. Should the applicants request more Federal funds than are available, the State reserves the right to reduce all reimbursement ratios. The recipients then have the choice of committing more State/local funds than anticipated, or revising their plans to bring them into balance with reduced financial resources.

The variable-reimbursement ratio formula, in contrast to the variable-allotment method, does not provide local planners with a firm estimate of anticipated Federal support. Because the final reimbursement ratio is de-

pendent upon the amount of Federal funds available for allocation by the State and the magnitude of expenditures as proposed on local applications, local recipients may have to ante more State/local funds than originally expected or scale down their planned efforts. This uncertainty is inimical to sound local planning.

A further distinction rests in the impact of the two methods on the equalization of Federal support. The variable-reimbursement method, in comparison, tends to disproportionately reward those eligible recipients who have relatively greater financial ability to pay. Even though their reimbursement ratio may be lower as a result, those recipients with greater financial ability are in a position to attract disproportionately more absolute Federal support simply by their enhanced capacity to expend more State/local dollars.

The project method provides several advantages to a State. It is very flexible in that a State is able to respond to emerging or newly-identified needs. Further, this flexibility enables the States to target their resources toward concerns of national and/or state-wide priority. The competitive nature of the project method encourages eligible recipients to be innovative, and to express this creativity in well-thought-out plans. This method lends itself to support of activities requiring short-term funding such as program development or elimination of sex bias and stereotyping in curriculum materials. The project method lessens a State's data base requirements. The local recipients assume the responsibility for providing the data to justify the requested levels of funding.

The development of sound project proposals requires eligible recipients to demonstrate capabilities in planning, writing and other grantsmanship skills. While these same capabilities are necessary to develop any local

application, the competitiveness of the project method emphasizes their importance. It should be noted that skills beyond grantsmanship are necessary for projects to accomplish their goals, specifically in the areas of management and evaluation.

Perhaps the most critical aspect of the formula and project methods is their ability to target special population funds to recipients with the greatest needs. Both methods possess this capability. The degree to which this potential will be realized, however, is highly dependent upon the allocation factors used to gauge need, particularly those specific factors focusing upon special population characteristics.

Allocation factors used to assess the need for special populations services focus upon incidence of those with special needs of a specific type (e.g., handicapped) present in a given reference setting. Reference settings most commonly used are a) vocational education programs, b) the school, or c) the district. Specific allocation factors may be classified into three categories according to their referent setting. For example, the number of handicapped students receiving vocational services has vocational educational programs as the reference setting. Each reference setting has implications for allocating special population resources.

Factors with a vocational program referent such as special population enrollment or average daily attendance in vocational programs are more a measure of a recipient's current efforts than of future need. In a stable environment where program expansion needs are low, incidence of those with special needs in current vocational programs would be a reasonable estimate of the requirement for funds. However, in situations where recipients are striving to meet unfulfilled needs for special population services, use of these factors may constrain access of those in need of special services through restriction of expansion possibilities.

Use of the school as a referent for special population needs assumes a constancy of vocational program effort across schools. A school in which vocational education serves a disproportionately greater proportion of the students with special needs will receive disproportionately less support than would a school with an equal number of students with special needs but a less intensive vocational service effort. School-based estimates of need also fail to consider the need for funds to expand programs to serve an out-of-school population. Since school factors concern a limited population (in-school persons), the factors may be an erroneously low measure of special population need.

District factors take into account the total demand for vocational education services by those persons currently receiving services and those who are in need but are not presently being served. Use of district estimates of the need for special population funds assumes a constancy of competitive delivery systems across eligible recipients that may belie reality. This criticism notwithstanding, district factors appear to provide the most precise measure of recipient need to expand services to those persons not being served. Thus, it would seem that a recipient's need for funds to support on-going programs and to expand programs could be best estimated by utilizing both program or school and district factors in the resource allocation procedure.

CONCLUSIONS

It is apparent that the state of the art in planning for the delivery of services to special populations has yet to reach it apogee. Planning for special populations represents new challenges to the States to ensure that vocational education is responsive to the unique needs of those special groups. This section describes some of the problems, factors and issues which characterize those challenges.

Policy Development

State policy defines the role of vocational education in providing employment skills to various segments of society. As a public expression of the commitment to preparation for employment for all who desire to work, policy provides direction to planning for services and can have far reaching influence on the delivery of vocational education to special populations. In the absence of direction provided by sound policy, local efforts lack coordination and can provide for inequities in services across districts.

There are numerous issues which administrators and board members must confront and resolve as part of the policy-making function. The resultant decisions will have a profound impact on the quality of planning for and services provided to special populations. For example, a question which must be addressed by State agencies is the role of vocational education in relation to other agencies in providing services to special populations. Traditionally, delivery modes under the jurisdiction of other service providers, such as sheltered workshops, have been responsible for providing employment training to certain special populations. With the present emphasis on education for all segments of society and the remediation of the unemployability among specific groups, vocational education is assuming a share in the responsibil-

ities which were previously borne by other agencies (e.g., developmental disabilities agencies). But the question remains as to how far should vocational education's responsibilities be extended and their resources tapped. How much support should vocational education provide before the decision is made that a student cannot succeed and an alternative delivery system is considered appropriate? Should this decision be based on actual failure or prognosis of failure? Or should program standards be lowered to enable students with special needs to succeed? What is vocational education's responsibility in serving the handicapped so as to ensure that they have access to a free and appropriate education?

The answers to such issues as these are certainly not obvious and require policy to clarify and affirm State intent. The implication of policy for the course of vocational education are manifold. Policies can direct the uses of Federal and State funds by prescribing a range of acceptable activities. Additionally, they can determine how funding, planning and service delivery are to be coordinated with other agencies. Definitions of what types of individuals constitute special populations and as a result the types of services available to them are ultimately decided by policy. Policies have the potential through the alteration of institutional arrangements to restructure the entire vocational education delivery system.

The import of policy for the delivery of vocational education to special populations necessitates their direct input in policy development. As evidenced in the discussion of procedures used to develop policies, elicitation of input from all of those groups and individuals ultimately affected by policy is in the experimental stages. Generally, few formal mechanisms exist in the States to obtain input from parties other than State agency staff. The bureaucratic structure of State vocational education agencies

further restricts the upward flow of information. Unless there is strict provision for lower level input to policy development, communication often flows one way--down. The resultant lack of involvement can be sufficient to create feelings of isolation and resentment on the part of those excluded from the policy development process. And policies, as a result, reflect the attitudes of the administration rather than those of populations to be served.

Needs Assessment

Assessments of the needs of special populations reflect various approaches for providing decision makers with information of assistance in planning. A review of recent approaches reveals three characteristics or issues which tend to constrain the state of the art for this component of the planning process. These characteristics are (1) a targeted approach for assessing needs, (2) limited attention given to the needs of out-of-school special populations, and (3) uncertainty concerning the "special" status of those persons who have yet to enroll in vocational education programs.

Special populations have such a diversity of unique needs that it would be extremely difficult--and expensive--for any State to conduct a comprehensive assessment of the needs of all of its special populations. Perhaps because of this, most needs assessments have been targeted at particular segments of those groups referred to as special populations. While a targeted approach is understandable in light of cost considerations, it can perpetuate an inequitable delivery system for those special populations whose needs have not been assessed. Targeted approaches bring to the forefront the unmet needs of the particular special population under consideration, but at the same time they are incapable of revealing the needs of other special populations whose needs might be even greater. Thus while they do provide planners with information on which goals and objectives can be based, they do not ensure

that the resultant goals will reflect the full range of needs of the State's special populations nor do they ensure that priority consideration will be given to those with greatest need.

An equally serious limitation which characterizes many existing needs assessment procedures is that they restrict their coverage to those individuals currently enrolled in school or to information available from school representatives who might not be aware of the particular needs of special populations outside of the school system. Such procedures risk the possibility of not identifying significant barriers which prevent large segments of a special population from enrolling in vocational education programs. These barriers might reflect needs for different types of training programs, transportation, child care services, more flexible course scheduling, etc. The extent to which such barriers prevent segments of special populations from enrolling in vocational education programs cannot be determined through an assessment of the needs of those currently attending school, since those not attending school might represent a very different segment of the same special population.

As applied to vocational education, the Federal definitions of "handicapped" and "disadvantaged" contain the qualifying clauses "cannot succeed in the regular vocational education program without special assistance..." or "require special services, assistance or programs in order to enable them to succeed in vocational education programs." Some people have argued that the Federal definitions make it impossible to assess the needs of these special populations prior to their enrollment in vocational education programs since their ability or inability to succeed in regular programs would not be known. For example, one State requires that "To be eligible for supplemental services, the student must not be succeeding in a regular vocational edu-

cation program.... The inability of students to succeed in a regular vocational program must be demonstrated after enrollment and in attendance in the vocational program." Such a position precludes the possibility of providing special populations with supplemental services which they might need in order to enroll in vocational programs, such as transportation, child care services, etc. This position appears to result from an overriding concern for justifying the expenditure of Federal funds and a rather restrictive definition of special populations which only includes those individuals who need special assistance or services that require expenditures beyond the costs of regular programs. By focusing solely upon those whose needs will require additional expenditures, one might inadvertantly overlook certain segments of special populations whose needs could be met through modifications which do not necessarily require additional expenditures, such as changes in course scheduling, the relocation of course offerings, or modifications in program admission requirements.

Formulation of Goals and Objectives

The identification of needs is intended to serve as a foundation upon which goals and objectives are to be based, however many States develop their goals and objectives without first conducting a needs assessment. Most procedures which are being used to develop goals and objectives for special populations do not include mechanisms for translating primary data on differential needs into goal and objective statements. The absence of such mechanisms jeopardizes the extent to which the resultant products will reflect the real needs of special populations. The limitation is not inherent to the procedures; however,some adjustments would be necessary to include primary data as input into the goal and objective development processes. Based on available descriptions of current procedures, the inclusion of needs

assessment data into the processes could be accomplished with but minor procedural modifications.

A second factor which impacts on goals and objectives is the extent to which their development is a coordinated effort on the part of various agencies and interest groups. Many special needs persons have multiple, interrelated problems. Typically each human service agency has responsibility for addressing only a limited set of these needs. The approach taken to alleviate their problems and satisfactorily serve their needs must be comprehensive in order to effect a significant change. Comprehensive service delivery begins with coordinated planning, particularly in the development of consistent and complimentary goals and objectives by the agencies and groups serving or representing the special populations.

The various approaches to setting goals and objectives are typically characterized by some type of participatory effort on the part of local and State agencies and advocacy groups. This cooperation is essential to developing comprehensive goals and preventing a duplication of effort. LEA involvement tends to strengthen local support of the designated goals and enhance their commitment to achieving the objectives. Soliciting input from consumers or the advocacy groups representing them provides additional assurance that the goals and objectives are not discrepant from the actual needs of the special populations. Obtaining such input is consistent with the goal development techniques discussed. However, it is the responsibility of the planner to assure representative input to the process.

There are several issues confronting State vocational education agencies as they move toward greater coordination in the provision of services to individuals with special needs. One of the most significant issues that must be resolved is the different set of regulations governing the allocation of

resources and the definitions of special population characteristics. For example, to provide comprehensive services for the handicapped, Vocational Education would necessarily want to coordinate their development of goals and objectives with Vocational Rehabilitation. However, this is difficult in light of the incongruencies in the two agencies' definitions of handicapped. Vocational Rehabilitation operates under the premise that a handicapped individual is one who has "a physical or mental disability which . . . constitutes or results in a substantial handicap to employment" (PL 93-112, Sec. 7). In vocational education, an individual cannot be considered 'handicapped' without reference to a particular vocational training situation. That is, the physical or mental disability alone does not constitute a handicap. Rather, it is whether or not the disability inhibits successful completion of a vocational program. These differences in definition affect the type of needs assessment information that the agencies obtain. Resultant data inconsistencies limit the extent to which goals can be coordinated between agencies.

The separation of responsibility is an equally perplexing issue with which SVEAs must contend in the coordination of goals and objectives with other agencies providing services to special populations. In many cases, agency goals overlap (as in providing vocational training through sheltered workshops to handicapped individuals or providing remedial education services to the disadvantaged). When the overlap occurs, State agencies must resolve the issue of who has primary responsibility so as to avoid the duplication of services.

Identification of Programs, Services and Activities

The identification of programs, services and activities for providing vocational education to special populations represents a departure from the

manpower planning approach so familiar to vocational education planners. In contrast to the traditional approach of matching vocational education programs to student interests and employment requirements, planning for the delivery of services to special populations primarily entails the identification of supplemental or support services which will enable special needs students to participate and succeed in vocational training programs. Oftentimes these support services will be new to the vocational education community. In other instances they will represent activities or programs which have traditionally been the responsibility of other State or local agencies, and coordination with those agencies will be necessary to provide the array of services needed by special populations. The challenges of providing new services and increased coordination with other deliverers of services have yet to be fully met by the existing processes for identifying program services and activities and allocating the responsibility for their delivery.

The unique service needs required for special populations to succeed in vocational education programs are not familiar to many vocational educators. Displaced homemakers, limited English-speaking persons, correctional inmates, migrant children, etc. represent special needs populations which are hardly the specialty of vocational education. Yet the state-of-the-art procedures for identifying programs, services and activities to achieve objectives for special needs populations tend to rely heavily, if not exclusively, on input from vocational educators. By limiting the identification process to those from within vocational education, the range of alternatives considered is likely to be restricted, and their potential for success in achieving objectives might not be fully appreciated. As a result, those activities selected for the achievement of objectives might not represent the most efficient means for achieving those ends.

Compounding the difficulty in identifying programs, services and activities for achieving objectives for special populations is the fact that some of the services needed by special populations are not within the purview of vocational education. Successfully providing services to special populations often requires multiple delivery systems, thus necessitating coordinated planning. Input from other agencies serving special populations is essential to determine which services will need to be provided by vocational education and which will be provided by other delivery systems. Such coordination is not characteristic of the state-of-the-art procedures for identifying activities and allocating responsibility for their delivery. Vocational Rehabilitation, CETA, Corrections, Mental Health, etc. generally are not involved in the process by which activities are identified for better serving special populations, and yet each of those agencies can play an important role in the coordinated delivery of services to special populations. The lack of such coordination is likely to perpetuate gaps and redundancy in meeting the needs of special populations and in achieving the goals and objectives of vocational education.

Coordination with local education agencies is also essential to this stage of planning. Because of the individualized nature of services to special populations, the decisions of how and whom to serve often rest with LEAs. It is the State's role to assure that activities implemented at the local level do indeed provide for effective and comprehensive services to individuals with special needs. In order to retain a leadership position in serving special populations, technical assistance and application review functions of the States must be conducted to ensure that activities are consistent with state-wide goals and objectives. The alternative is the initiation or continuation of activities with little regard for their relative success in achieving objectives.

Resource Allocation

Activities identified as necessary for achieving objectives become implemented through resource allocation and budgeting procedures. The review of current procedures for allocating and budgeting resources to meet the needs of special populations reveals two key constraints which tend to limit the state of the art in this phase of planning: (1) funding allocation formulas which contain rather global measures of the prevalence of special populations, and (2) local application preparation and approval processes which are oftentimes only tangentially related to State goals and objectives for special populations.

A primary purpose of planning for special populations is to target funds to eligible recipients on the basis of relative needs. In order to target allocations, both the variable-allotment and variable-reimbursement ratio formulas require the inclusion of factors which directly reflect eligible recipients' special population needs. Since special populations are comprised of such a variety of different groups, the inclusion of multiple factors would seem to be required to more accurately reflect the relative needs of eligible recipients. Yet a common procedure is to use very global measures of special populations when allocating funds. As a result, some special populations are overemphasized by the formulas while others are underrepresented. For example, most funding formulas contain some measure of the prevalence of economic disadvantagement; however,few allocation formulas contain measures of the relative prevalence of academic disadvantagement, handicapped, displaced homemakers, etc. In part, the use of a few global measure for special populations is probably due to a lack of accurate and current data on special populations which the States could use in their allocation formulas. While the specific impact which this has on the services provided to special

populations is not known, one might assume that it results in certain inequities between the needs of some special populations and the funds available for meeting those needs.

Perhaps a more serious limitation in the procedures used to allocate funds to eligible recipients is that it is oftentimes difficult to ascertain any relationship between the activities being supported and existing State goals and objectives for special populations. This is not meant to imply that a relationship does not exist; rather, some local application procedures lack the information necessary for determining whether or not local plans are consistent with State goals and objectives pertaining to special populations. It appears that there is considerable variability in the extent to which States require applicants to define precisely the programs, services and activities to be delivered to special populations in order for the application to be approved and funds committed to the applicant. Furthermore, the majority of States reviewed do not require the eligible recipients to identify the State goals or objectives which will be addressed by their proposed services. As a result, the final step in planning for special populations often contains an indefiniteness regarding the services which will be delivered and the extent to which those services are consistent with State needs.

Epilogue

The preceding summaries of some of the current issues associated with each of the components of special needs planning taken in toto provide an emergent view of the state of the art in special population planning. The current status can best be characterized as reactive, with States attempting to adjust their response capabilities to deal with more stringent legislative requirements and increasing public demands for inclusion of those heretofore

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ignored. These adjustments are often attempts to acclimate to new demands with minimum disruption. Frequently, planning for special populations has been approached as an 'add-on' to existing program planning systems and institutional arrangements.

An assumption underlying current practice seems to be that the needs of special populations can be accommodated within existing institutional arrangements with but perhaps minor alterations. The major issue, then, is whether special populations are indeed special and require a realignment of organizational arrangements, including planning, to serve their needs, or whether they can be effectively accommodated within the existing structure.

Since the advent of the Vocational Education Act of 1963, vocational education has been charged with the dual responsibility of serving the society at large while also ministering to the special needs of its individual members. This oftentimes conflicting mandate has been operationalized into two major indicators of need to guide vocational education planning: estimated occupational employment required to sustain an anticipated level of economic growth, and the number of individuals anticipated to enroll in vocational programs, which is taken as a measure of student demand. Depending on the philosophical predilection to view vocational education as having primary responsibility to society or to the individual, these measures weight differentially in decisions to alter the mix of vocational programs. Although divergent opinions exist as to their relative importance, there is general social concensus that these two measures should serve to guide planning of vocational programs.

While appropriate for program planning, emphasis on these measures appears misplaced when planning for populations whose 'specialness' results from their restricted access to or inability to succeed in regular programs

without special assistance. Employment requirements play a relatively minor role in planning to overcome barriers that restrict access or to provide special assistance necessary to overcome personal dysfunctions. Planning by necessity is focused on population needs and the resources necessary to provide required support services. Special population needs cannot be equated with student demand as conventionally defined since barriers often restrict access to programs and create a 'discouraged student' effect with a consequent reduction in population demand for program services.

Decision alternatives differ when planning for programs than when planning for special populations. Whereas the purpose of program planning is to ensure that programs are offered to produce the job skills for which there is sufficient employment and/or student demand, special population planning focuses on the provision of supportive services to enhance capabilities of individuals to participate and succeed in existing programs. Because of the diversity of barriers and the multiplicity of ways in which barriers can interact with personal disabilities to restrict success, the conditions to be dealt with are considerably more complex in special needs planning.

The increased complexity calls for a greater variety of action alternatives. Demand for resources and expertise to overcome the accumulated effects of longstanding disadvantagement may well exceed the conventional boundaries of vocational education resources and wisdom and require the coordinated involvement and investment of multiple service providers. The interests of special populations are frequently represented by advocacy groups whose inputs into the planning process must be sought.

The implication is that planning for special populations has a unique set of requirements that cannot be adequately met by merely extending the boundaries of the present program planning system to incorporate special pop-

ulations. What is needed instead is a planning component especially tailored to the unique requirements of special population planning.

In response to this need, a systematic procedure for assisting States in the design of a planning system based on the MERQ planning components and suited to their particular circumstances is currently under development. This procedure is to incorporate the most exemplary practices in the state of the art for each component of the MERQ model and is to provide decision heuristics suited to the unique conditions and constraints of the users. A description of the procedures and the decision heuristics for their selection will be the subject of a future report.

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